



*The*  
**MODERN  
HOSPITAL**

Vol. VII

*August, 1916*

No. 2

# First Aid and Emergency Treatment

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PHILADELPHIA, U. S. A.







# THE MODERN HOSPITAL

*A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services*

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## SYSTEMATIC HEALTH SERVICE FOR EMPLOYEES

### **Employees of the Metropolitan Life Insurance Company Are Periodically Examined as to General Health Conditions—A Dispensary Installed—Clinics For the Examination of Eyes and Teeth Special Features—Special Provision For Tuberculous Cases**

BY LEE K. FRANKEL, PH. D., SIXTH VICE-PRESIDENT METROPOLITAN LIFE INSURANCE COMPANY, NEW YORK

INDUSTRY is rapidly developing a conscience. No longer does it feel that it has fulfilled its obligations to employees when it has paid the individual worker his wage. It is also necessary to provide a safe and healthful work place. A part of this new attitude can be directly traced to the legal enactments favoring workers which have been placed on the statute books, but the social conscience of employers has developed even farther in many cases than would have been required by existing or contemplated legislation. Many are living up to their belief that the wage paid shall purchase time, interest, and effort, but that it does not and must not buy physical or mental exhaustion.

Employers are not wholly disinterested in their efforts to provide good working conditions. It has come to be generally realized, although but few statistics are as yet available, that health conservation very definitely improves the productivity and working ability of employees. More than this, it makes for loyalty on the part of the working force and reduces the time lost because of illness. Medical care and dispensary facilities help to keep employees at work, or at least to return them to their tasks at the earliest possible moment.

One of the most fully developed plans for the care of employees is that in force in the Metropolitan Life Insurance Company. This company employs about 18,000 persons—13,000 in its agency and field force and 4,500 in its home office. Of the latter group about two-thirds are women. An attempt is here made to care for employees

and to maintain them at the maximum of physical efficiency. In the belief that its experience will be of assistance to the increasing number of persons interested in this subject, this article has been prepared.

All candidates for employment are medically examined before entrance into the company's service. The medical examination is a thorough one, and it includes a report on family and personal history, an examination of heart, lungs, sight, hearing, and teeth, coupled with urinalysis. The question blank in use is similar to the one used by the company in examining applicants for ordinary insurance. The purpose of the examination is to protect prospective employees from work for which they are not physically qualified and to protect employees in the company's service from contagious diseases.

Applicants for field positions in the company are also carefully examined for employment. The agency work of the company requires employees to be on their feet a large part of the time. The examination in this case is, consequently, in a large measure, to keep persons physically unqualified from entering the service of the company.

#### ANNUAL REEXAMINATION

During the past year all employees in the service of the company have been medically examined—the employees in the home office by a special group of examiners and those in the field by the company's regular medical examiners. The examination in this case has been of the same type

as required of applicants for life insurance, and it is as thorough as that given to applicants for employment. The aims of the examination are, however, very different. The examination on entrance is to protect the applicant and the existing



Fig. 1. Metropolitan Life Insurance Company, New York. Dental examining room and office of chief dentist.

force. Here the purposes are the prevention of diseases, the correction of ascertained minor defects, the detection of disease in its incipient stage, the encouragement of treatment in suspected serious conditions, and the recommendation of treatment where neglected. A careful analysis of the records obtained is at present being made, and the analysis of the impairments found should be a valuable contribution to the material on the subject of health of persons engaged in industry.

While all employees are at present examined annually, additional periodic examinations are made of employees in the commissary department. The purpose of this is evident, as the danger of transmission of contagious diseases through the handling of food is well known. It is particularly important that the company protect its employees by carefully guarding the health of those engaged in preparing and serving food for home office employees. This work in the home office is in charge of two physicians on full time, one nurse on full time and one on part time, and a group of clerks,

#### DISPENSARY

The purpose of a medical dispensary is to care for sickness or accident arising during working hours, and secure proper and immediate attention for those who are not in good health. In order to accommodate the work of the medical dispensary, larger quarters were secured during the past year. The dispensary now contains a large waiting room, office of the chief nurse, separate rest rooms for men and for women, medical and surgical rooms, together with various retiring rooms for special examinations. It also contains an optical examination room and an optical fitting room. The walls are of white tile and the floors are of concrete.

During 1915, 25,263 visits were made, a daily average of 91.5. The average cost per visit was 33.3 cents, which does not include rent. It is interesting to note that during the last six months 3,112 different persons out of a total of 4,500 persons employed in the home office visited the dispensary.

This work is in charge of a full-time physician and three nurses. In addition to this, we have

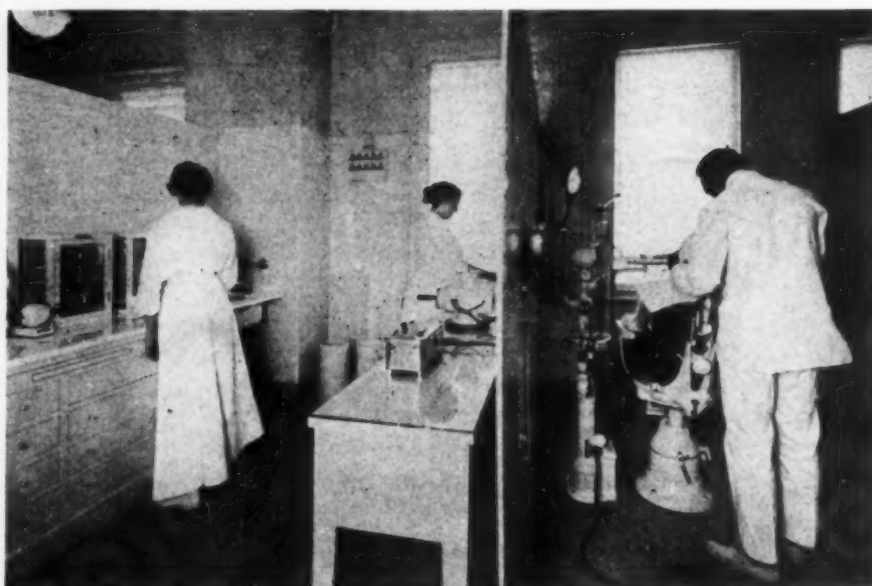


Fig. 2. Metropolitan Life Insurance Company, New York. Dental clinic and sterilizing equipment.

specialists in diseases of the eye, ear, nose, and throat, who conduct the clinics in this field.

A detailed record of the rest room services is as follows:



## REST ROOM RECORD—JANUARY 1, 1915, TO JANUARY 1, 1916

	Total visits	Women	Men	Medical	Surgical	Daily average	Sent home	Sent to dispensary	Sent to hospital	Granted leave of absence	Cost
January .....	2,015	1,355	660	1,405	610	89.5	80	35	2	4	.271
February ....	1,788	1,199	589	1,092	696	89.4	56	24	1	4	.310
March .....	2,204	1,545	659	1,491	713	88.1	138	22	1	9	.284
April .....	2,077	1,445	632	1,504	573	86.5	132	32	0	21	.294
May .....	1,887	1,366	521	1,280	598	85.7	93	28	1	17	.344
June .....	2,116	1,480	636	1,305	811	88.1	88	40	0	21	.314
July .....	1,964	1,299	665	1,234	730	85.3	72	23	0	18	.388
August .....	2,166	1,430	736	1,395	771	90.2	78	29	0	28	.351
September ...	2,016	1,343	673	1,340	676	89.6	87	24	0	3	.399
October .....	2,306	1,499	807	1,513	793	102.4	84	27	0	9	.334
November ...	2,002	1,314	688	1,287	715	93.1	75	39	1	5	.390
December ....	2,722	1,798	924	1,987	735	111.1	184	39	0	9	.318
Total .....	25,263	17,073	8,190	16,842	8,421	91.5	1,167	362	6	148	.333



Fig. 3. Metropolitan Life Insurance Company, New York. Medical rest room, showing reception, medical, and surgical rooms adjoining.

## SPECIAL CLINICS

An optical clinic for the examination of all types of eye conditions has been installed. During 1914, 475 clerks were examined, and during 1915, 757 examinations were made. By arrangement with a manufacturer of optical supplies the practice of furnishing eye-glasses at cost to employees has been continued, and during the year 2,934 eye-glasses were supplied, costing \$3,377.70.

Daily clinics for nose and throat are also held. In these cases local treatment is given when this is of simple character, and in other cases employees are referred to dispensaries or to specialists.

## TUBERCULOSIS CARE

The company has maintained for a number of years a sanatorium for the care of tuberculous

employees, which is to be described in some detail in another number of this journal. The care given to pretubercular clerks and those who have returned from the sanatorium is of interest. On returning from the sanatorium, each clerk reports biweekly to be weighed and bimonthly for a period of six months for a careful examination of the lungs and a survey of general health. After this time the examination is made every three months for an additional year. In this way the cases are carefully watched, and at the first indication of recurrence are returned to the sana-



Fig. 4. Metropolitan Life Insurance Company, New York. Women's rest room.

torium. A careful study of tuberculous clerks who have returned to the home office has been made. A total of sixty have been under observation in the medical rest room during 1915. Of these, eight relapsed to their tuberculous condi-

tion and fifty-two are now in active service. Of the total of eight, four died during 1915 and two were retired within the year. Equally satisfactory results have been observed among employees in the field force who have returned to their work.

Clerks who are anemic or in a tuberculous condition report to the medical rest room twice daily for milk. During the past year there was a daily average of thirty-five. Their condition is carefully watched, and without doubt this preventive work has done much to reduce the number of cases of tuberculosis among home office employees, and to secure early treatment for such cases as have developed.

#### CARE AFTER ILLNESS

Clerks who have been absent because of illness are required to report to the medical division before they are allowed to return to work. This is for the double purpose of protecting the convalescent employees from going to work before warranted by their physical condition, and also to protect the other clerks in the home office from the possibility of infection. In addition to this, a nurse is frequently sent to the clerk's home in order to determine the extent of the illness and to render such assistance as may be necessary.

#### DENTAL CLINIC

On July 1, 1915, a dental clinic for home office employees was established. Examinations are given and teeth thoroughly cleansed semiannually. The equipment of the dental clinic consists of an emergency chair, the office of the chief dentist, a sterilizing room, five dental chairs, and lockers for men and women employees. A radiographic outfit has been installed, and all suspected cases of blind abscess are being examined. Studies are at present being made of the relation of conditions found in the annual medical reexaminations and those brought out by the dental clinic. It is believed that interesting and suggestive results will be obtained.

This statement of the work that is being done covers but one part of the company's efforts for its employees, and it is proper to mention the free luncheon service for home office employees, the insurance against sickness, the provisions for life insurance, for pensions, and for educational and recreational activity. These are of as much importance as the medical and dental care described. The latter part is, however, of most interest to hospital workers. Through it is relieved, to some extent at least, the strain of routine work to which so many of our hospitals are at present restricted. The opportunity is given them to do special work in their clinics because selected and

special cases are sent to them. With the spread of the movement of giving special medical care to employees, the time will come when a large number of hospitals now doing general work will be able to specialize and to limit their activities to a selected group of diseases and conditions.

It is to be hoped that hospital workers will assist us in developing uniform reports and records for medical dispensaries and medical examinations in order that the results obtained may be compared with those of hospital dispensaries and with organizations dealing with similar groups of employees.

#### RED CROSS ORGANIZES BASE HOSPITALS

##### Large General Hospitals at Many Points to Be Fitted for Military Purposes in Case of War

The director-general of the Red Cross, Colonel Jefferson R. Kean, has completed the organization of several base hospital units. These units are made up of the personnel of the larger general hospitals, and include the following institutions:

Presbyterian Hospital, New York. Director and chief of surgical service, Dr. George E. Brewer.

Mount Sinai Hospital, New York. Director, Dr. N. E. Brill.

Bellevue Hospital, New York. Director and chief of surgical service, Dr. George David Stewart.

New York Hospital, New York. Director and chief of surgical service, Dr. Charles L. Gibson.

New York Post-Graduate Hospital, New York. Director, Dr. Samuel Lloyd.

Brooklyn Hospital for navy. Director and chief of surgical service, Dr. W. B. Brinsmade.

Massachusetts General Hospital, Boston. Director, Dr. Frederic A. Washburn.

Boston City Hospital, Boston. Director, Dr. J. J. Dowling.

Harvard University Hospital, Massachusetts. Director and chief of surgical service, Dr. Harvey Cushing.

Lakeside Hospital, Cleveland. Director, Dr. George W. Crile.

Rochester Hospital, N. Y. Director, John M. Swan.

Johns Hopkins Hospital, Baltimore. Director, Dr. Winford Smith.

Harper Hospital, Detroit. Director, Dr. Angus McLean.

In Chicago, Michael Reese, Presbyterian, St. Luke's, and Mercy hospitals have been designated, and even as remote points as San Francisco have been called on to participate in the movement. Only recently Dr. Summersgill, of the University of California Hospital, was asked to fit his institution for base hospital uses.

It is intended that these base hospitals shall be transported to the various seats of military operation in case of war, and it is estimated that one base hospital will be required for each 20,000 enlisted men. Their duties will be to receive the sick and wounded transferred from the field hospitals at the front, and will be equipped to receive approximately 500 patients. All hospitals organized by the Red Cross, if called into active service, pass under the authority of the War Department and become an adjunct to its medical service. The medical officers are given military commissions in the reserve corps, and receive voluntary commissions when called into active service.



## PRESENT SCOPE OF WELFARE WORK IN THE IRON AND STEEL INDUSTRY

**Many Lines of Welfare Work Have Been Introduced and Are Being Successfully Conducted—Not Only Is the Workshop Improved, But the Household Is Being Benefited—The Family as Well as the Worker Is Helped to Advance**

By THOMAS DARLINGTON, C. E., M. D.

**A**MONG the general subjects now covered by welfare work in the American iron and steel industry are the following:

Prevention of accidents.	Lighting.
Drinking water supplies.	First aid.
Washing facilities.	Hospitals.
Laundries.	Trained nurses and social workers.
Lockers.	Physical examination of employees.
Toilet arrangements.	Lunch buckets and lunch rooms.
Drainage and sewage disposal.	Commissaries (bread, meat).
Disposition of garbage and rubbish.	Milk supplies.
Care of stables and animals.	Flies, mosquitoes, and vermin.
Heating work places in winter.	Clean mills and yards.
Cooling work places in summer.	Housing.
Ventilation.	Gardens.
Overcrowding.	Rest and recreation.
Dust, gases, and fumes.	Insurance.
Education.	Pensions.
Relief funds.	Saving and investing.
Compensation.	

The results accomplished by and the benefits derived from welfare work must be judged largely by the reasons the industries have for doing it. Owing to a lack of statistics for comparison, the ultimate results of such welfare work cannot yet be shown. Later on, when statistics have been recorded, results can be stated in more definite terms, but even then the highest results cannot be tabulated or even expressed in words. Nevertheless, by a short review of some of the work we may realize to a certain extent what these benefits are.

Much has been done toward obtaining wholesome drinking water supplies. Many supplies have been examined, not only by survey of their source, but also bacteriologically and chemically. As the result of such examination, many supplies have been abandoned, while other supplies, such as springs, have been walled up to prevent surface pollution, or have been removed, while still others have been filtered or purified. It requires no special investigation to show the good resulting from such work. Scientific research has conclusively proved that polluted water supplies may cause disease, such as typhoid, dysentery, and diarrhea. The abandonment of such polluted supplies has made conditions more healthful. Besides being purified, some of the mill supplies have been cooled

by ammonia machines or brine solutions, so that icing the water has been eliminated. Where such elimination has been effected, cramps have ceased to occur. Moreover, in the process of purification, removal of turbidity, proper cooling, and the use of drinking fountains, the supply is made more attractive, and consequently more water will be drunk. For physiological reasons this favorably affects both health and efficiency. Water is a natural constituent of the body, and is to be considered as a food, though not in the sense that it liberates energy. It affects secretion and excretion, and the activity of the various organs; it aids in the absorption of food and carries away waste; it diminishes fatigue; it regulates body temperature and acts as a distributor of heat. There seems to be no question that the drinking of water lessens the use of alcoholic drinks. Water not properly treated may carry lead in solution, and be more or less poisonous, and drinking cups used in common are liable to carry disease.

Much has been done in the installation of basins and showers, and in the erection of dry houses, in many places a large percentage of the employees bathing daily. Here, again, we cannot adequately estimate the good derived, but we do know that such facilities increase the respect of others. The opportunity to wash before going home makes the work of the home less burdensome, and cleanliness of the hands is of special importance, because hands carry disease. Shower baths affect the circulation of the blood, not only in the skin, but in the whole body. They produce a redistribution of the blood in the body, and for the time being there is an actual change in the blood itself. Cold showers increase capacity for muscular work. Showers eliminate more rapidly the products of waste, and so constitute one of the methods of relieving fatigue. A shower bath removes the waste products from the skin, and makes one less liable to feel a change in temperature. It reduces the heat of the body, especially on humid days, when the body temperature may rise above normal. Incidentally it may be mentioned that the roller towel has been abandoned in the majority of plants.

Many new toilets of modern construction have been built and hundreds of old privies have been abolished. Special care has been given to the exclusion of flies and the prevention of pollution of

the soil. There have been many improvements in the disposal of collections from pan privies, especially by incineration or depositing in septic tanks.

Pollution of streams has been stopped in many

prevalence of such dust has been entirely avoided in certain mills in the industry. Air conditions have been much improved by the elimination of the hydrocarbon series and other gases produced

by open fires where combustion is incomplete, as these gases are now carried to the outside of the building by properly constructed conduits. Many improvements have been made in the heating of plants in winter by fresh air brought from the outside, filtered, warmed, and distributed to the various parts of the building to be heated, which insures a good supply of air free from dust and gases.

Cleanliness has also been encouraged. Frequently men have fallen upon fruit skins or the remains of luncheon thrown upon the ground. Perhaps more has been done in the making of clean yards than in any other direction. It is also to be noted that the psychological effect of pleasant and clean surroundings has an excellent effect on the workmen. Beauty and order are persuasive everywhere, and few people can resist their influence.

Progress in first aid has been very extensive,



Fig. 1. Iron and Steel Industry. First aid team at mine No. 1, Penn-Mary Coal Company, Heilwood, Pa.

cases. Thousands of dollars have been spent for drainage, particularly of back alleys and streets. This drainage has had a very beneficial effect in the prevention of the breeding of mosquitoes and prevention of malaria. Better methods of collection of garbage are constantly being installed, with short periods of collection. Much has been done in educating employees in the use of garbage cans and the necessity of keeping the contents covered, which prevents the carrying of bacteria by flies from the can to the table. The prevention of the breeding of flies, especially in mining camps and villages, has been largely effected by the prompt removal of manure and making the stables more sanitary. Education by means of circulars explaining the dangers of flies as carriers of disease has accomplished a great deal.

The cooling of work places in summer is now being considered in many plants, and efforts are being made to have heated work places more comfortable, thus preventing heat stroke. Thirty years ago, according to English statistics, nearly all who breathed dust from grinding steel and stone died sooner or later from tuberculosis. The

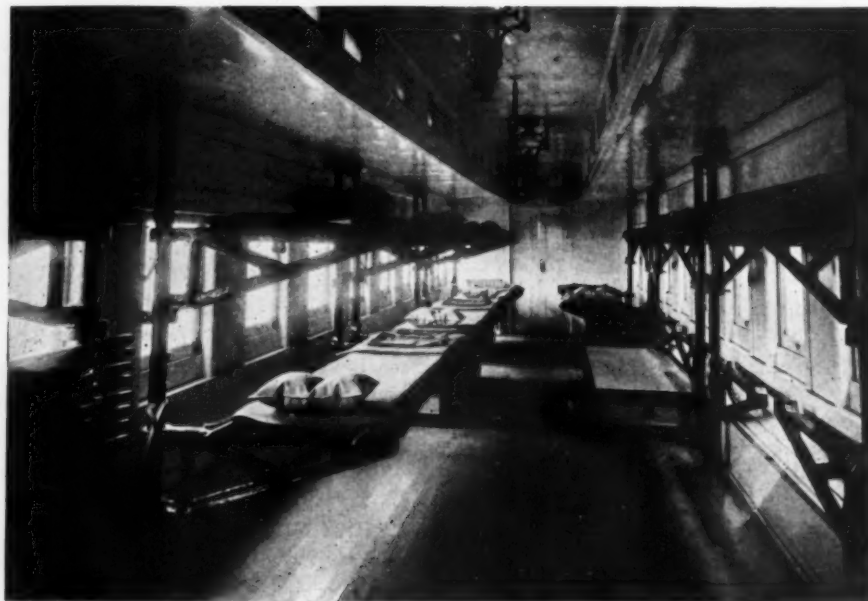


Fig. 2. Iron and Steel Industry. First aid car of the Tennessee Coal, Iron and Railroad Company.

and the steel industry is now leading the world in this line of welfare work. The results of such work have never been better shown than in the paper read before the American Iron and Steel Institute a year ago by the surgeon of one of the



largest companies. The reduction of septic cases from 50 percent to  $\frac{1}{10}$  of 1 percent speaks volumes. Nowhere else in the world has such provision been made for the care of employees who are injured. The emergency hospitals which have

and in other houses set aside for the education of mothers they have been taught to make rag carpets, the boys have been taught carpentry, classes of girls taught how to sew, and older girls taught cooking and the care of the home, and mothers how to cut out children's garments. Domestic educators have taught how to clean house and the essentials of good house-keeping.

What the human race will achieve in the future depends much on the conservation of the health of the children of the nation and on the education of these children. Many efforts have been put forth in the industry for the prevention of disease among children. The establishment of playgrounds is a step in this direction. These playgrounds promote health, education, morality, and happiness. They promote health by the effect of sunlight, of fresh air, of exercise on body processes,



Fig. 3. Iron and Steel Industry. First aid underground room of the H. C. Frick Coke Company.

been provided near mine and mill stand today as examples for the whole world, and they have materially aided in reducing human suffering. Many lives have been saved as progress has been made to prevent fatal termination by prompt care and by the knowledge on the part of the injured workman that such care is the best that can be obtained.

A rest farm for the wives of employees who are in poor health has been established, which is under the care of a physician and nurse. The support given settlement houses and the employment of trained nurses has helped in keeping the companies in sympathy with the employees and replacing despondency with cheerfulness. These trained nurses have given their attention to the women and children, particularly babies. Their duties include the weekly weighing of babies, teaching mothers how to dress and undress them, how to modify their milk, the guidance of expectant mothers and nursing them during confinement, the care of children, medical school inspection, and other things too numerous to mention. At many of these settlement houses

and by inducing appetite and healthful sleep. Play is essential to the education of the child. Playgrounds promote morality and happiness. At many of the playgrounds certain accessories have been provided which aid both in edu-



Fig. 4. Iron and Steel Industry. Hospital of the American Bridge Company.

cation and in health, among which are drinking fountains, wash rooms, and water closets. Teachers have been provided to instruct in play and in the use of these accessories. Besides recreation for the younger people, club houses have been

erected for the older ones, and in fact these club houses provide recreation for all ages.

All energy is derived from food, and good food is, therefore, of great importance. Some plants have provided dining rooms and restaurants, with properly prepared and well-selected foods, furnished at the lowest practical price, served under cheerful and pleasant surroundings. To prevent ptomaine and other similar poisoning, properly constructed commissaries are oftentimes necessary in order that food may be properly protected from flies and kept from spoiling by means of refrigerators.

Many a man has been kept awake by a sick and crying child, the result of improper food, and in-



Fig. 5. Iron and Steel Industry. Instructor from the Illinois Steel Company, South Chicago, attending the family of recent arrivals.

juries have happened to a man from the worry over the sick child at home. Such conditions have been improved in certain places by furnishing certified milk at a reasonable cost, some companies having herds of cows for this purpose. Education of the children has not been neglected, and in many places school houses have been erected for the children of employees, the teachers being furnished by the state. In some churches have been built.

Good housing is essential to both health and contentment, for here the workman builds up his strength to perform life's duties. Excellent houses have been built by some companies on sanitary sites, and rented or sold at reasonable rates, many of such houses having all modern conveniences. In many instances construction camps have been improved.

Of distinct economic value has been the assistance given by employers to those living in mining and industrial villages by fencing in plots for gardens, assisting, when necessary, in plowing and fertilization, and stimulating the employees and encouraging them in thrift and industry by offering them prizes for the gardens. These gardens reduce the cost of living. The amount of vegetables grown is often more than enough for the family, and some families have a surplus to sell. Gardens promote health by bringing the members of the family into the fresh air and sunshine. They mean cleaner yards and better care of drainage and waste, thus preventing odors and avoiding the breeding of flies and mosquitoes; they provide a greater variety of food, as many persons eat too much meat, and an excess of flesh diet is not conducive to the best work, growth, or health; and they tend to the abolition or the confining of domestic animals. Gardens promote morality, keep the owner from the saloon, and promote his own self-respect; they help make homes, and have a refining influence on the family.

The subjects mentioned above constitute some of the general lines of welfare work which are now being conducted by the iron and steel industry. All of the topics named in the outline at the head of this article have had careful consideration, and many have been carried to an actuality, some companies excelling in one direction and some in another. Various lines of welfare work have been well done in different places, and millions of dollars are being spent annually to improve the conditions of labor in the iron and steel industry.

It is most commendable to relieve suffering, but it is far greater to search out and remove the causes of disease, of penury, and of crime, and to feel that one may say with Abou-ben-Adhem, "Write me as one who loves his fellow-men."

When the writer contemplates the large number who are interested in this welfare work, all interested in helping their fellow-creatures, he feels like exclaiming with Shakespeare:

Oh, wonder,  
How many goodly creatures are there here!  
How beauteous is mankind!  
Oh, brave new world, that has such people in it.

Surely no work becomes one better, and it is hoped that the outcome will help to realize the vision of Tennyson:

Ring out the old, ring in the new.  
Ring in the valiant man and free,  
The larger heart and kindlier hand;  
Ring out the darkness of the land,  
Ring in the Christ that is to be.

The Hospital for Women of Maryland, Baltimore, Md., is erecting an addition to serve as a home for its nurses.



## PROVISION FOR MEDICAL CARE UNDER HEALTH INSURANCE

**Hospital Treatment One of the Prerequisites, and Arrangements Must Be Predicated on Such Provision—Some of the Details of Operation Likely to Prevail in the Future**

BY ALEXANDER LAMBERT, M. D., NEW YORK, CHAIRMAN OF THE SOCIAL INSURANCE COMMITTEE,  
AMERICAN MEDICAL ASSOCIATION

THE inevitability of health insurance for the wage-earner under state auspices is so widely recognized that it behooves the medical profession to consider seriously this subject which so vitally affects the health of the industrial population, as well as matters of professional interest. The forerunner of health insurance—workmen's compensation—already has been adopted in thirty-four states within the short space of six years, while in a few states payment is made under workmen's compensation for diseases clearly contracted as the result of employment. The next logical step is, therefore, to protect the wage-earner not only when his disability is due to sickness or accident arising directly from his employment, but also when his disability arises less obviously from this as well as from other sources.

Bills providing for just such protection to manual employees and other employees earning less than \$100 a month were introduced into the legislatures of Massachusetts, New York, and New Jersey during the session of 1916. For these groups health insurance is made compulsory, because experience elsewhere has shown that voluntary insurance does not reach the persons who most need protection. The benefits provided are medical, surgical, and nursing attendance, including necessary hospital care, medicines and supplies; also a cash benefit beginning on the fourth day of disability equal to two-thirds of wages and given for a maximum of twenty-six weeks in one year; and finally a funeral benefit of not more than \$50. The cost of these benefits and their administration, amounting to about 3 percent of the wages, is to be borne two-fifths by the employee, two-fifths by the employer, and one-fifth by the state. The administration is to be vested in mutual associations of employers and employees, organized according to localities and trades, and managed jointly by employers and workers, under the general supervision of a state social insurance commission.

The organization of this medical aid under health insurance presents very definite problems, of which one is the adoption of a system of administration which will guarantee excellent medical service. A second is the adoption of a method of payment which will be not only adequate to the physician, but which will also encourage a high standard of service.

An effort to solve some of these problems has been made in the third edition of a model health insurance bill just published by the American Association for Labor Legislation. In this draft no single method of organizing medical aid has been saddled on any one insurance carrier; instead, each carrier is free to select the method most suited to local conditions, subject to the approval of the social insurance commission. In granting approval the commission will be guided by the advice of the medical advisory board selected by the various state societies, so that the medical profession will have an opportunity to express its preferences through this body, which is to be consulted on all medical matters. As an alternative, the carriers in a district may unite into a health insurance union, and cooperate in the arrangements with general practitioners, nurses, specialists, or hospitals.

One arrangement which a carrier or a health insurance union may adopt is that of a panel of physicians. If this method is selected, certain conditions must be fulfilled. First, any legally qualified physician shall be entitled to join the panel. The possibility of setting a definite qualification, such as an examination or other test for physicians wishing to undertake insurance practice, has been suggested as one means of obtaining especially well-qualified men. This method would, of course, offer some guarantee that an insurance doctor would be a more able man than some practitioners found in industrial districts. As a matter of practice, it is difficult to see how mutual associations of employers and employees established by state legislation would be justified in setting up standards for medical practice other than those maintained by the state law for licensing physicians. For this and for other reasons it seems desirable that health insurance should not set up a conflicting standard. A second stipulation is the right of the patient to select any doctor on the panel, subject to the physician's right to refuse a patient. This provision is one which many physicians and patients believe essential if the personal relationship between doctor and patient is to be maintained. A third condition is contained in the limitation placed on the number of insured patients whom a panel physician may undertake to treat. This is expected to prevent undue concentration of patients among

a few physicians, and thus prevent the hurried attention given to patients when insurance practice is too large. On this point of careless work the Publication Committee of the New York *State Journal of Medicine* says, "Medical public opinion demands . . . that the physician shall not permit himself to be placed in positions where he gives careless, incompetent service, to the injury of those under his care. Any physician neglecting this standard loses caste. He is condemned by his colleagues, and the position or system in which such service is likely to occur is held in contempt by the profession, and has been classified under the opprobrious name of contract practice. All medical service is really a contract, and many physicians under salaries, such as those with insurance companies or railroads, are not condemned, nor do they lose caste by accepting such contracts. But any contract which carries with it an unreasonable amount of work by the doctor, which in turn forces neglectful, hurried service to the patients, is always condemned." Undoubtedly the low rate of payment prevailing in lodge practice has tempted some physicians, if they are to make a living, to treat more patients than they can give careful attention. The proposed establishment of a maximum number of insured patients will eliminate the most flagrant abuse on this score.

A second method of organization is to employ salaried physicians, and to give the patients reasonably free choice among those so employed. This system, already common in industrial practice in this country, may prove especially advantageous in localities where a large number of persons are employed in any one industry or plant, because of the familiarity which a doctor will gain of the illness traceable to the occupation. In still other areas a carrier, as a third possibility, may provide a district medical officer for the service of all patients within a specified area. Although these last two methods do not provide for the free choice possible under a panel system, the insured persons and their employers, through their representatives in control of each fund, are free to select the system the members prefer.

Supervision of doctors by other physicians would effect an improvement over the present-day medical practice, since supervision will bring to light the incapable man who, by his actual handling of cases, has proved his inability. On such findings of fact a carrier responsible for the proper care of its members would be justified in excluding from its panel the physician who had proved incapable. This oversight is provided in the bill through the medical officer of the fund employed to "examine patients who claim

cash benefit, to provide certificates of disability, and to supervise the character of the medical service in the interests of insured patients, physicians, and carriers." A suggestion of doubtful value and probably impractical has been made that these duties might very well be intrusted to an officer of the state board of health appointed with special reference to his qualifications for this service, and that thus the judgment of an impartial physician as well as the official cooperation of the health department would be secured. It is evident that in either case the medical officer who examines the patient asking for benefit, and who furnishes him from time to time with a certificate of disability, will be in a position to know the efficiency of each individual physician. Moreover, the separation of the two functions of treatment and of certification will relieve the attending physician of the distasteful duty of refusing a certificate to a patient, and at the same time will free him of any fear that, because of care in granting certificates, he is losing popularity with his patients. This simple expedient will probably do as much to maintain a high standard of service as almost any other one provision in the bill.

The easy access to a second opinion, which will entail no extra expense to the patient, and the ready cooperation between the general practitioner, the specialist, and the hospitals would also be an improvement. Hospital care, as one of the benefits which have been paid for in the weekly contributions, is to be given during twenty-six weeks of disability in the necessary cases, with the approval of the medical officer and with the consent of the insured patient or his family, and may be demanded by the carrier if it is imperative for the proper care of the patient. If, under such circumstances, the insured should refuse to enter a hospital, he is to be penalized by having his cash payments stopped. Financial arrangements for hospital treatment which have met the approval of the social insurance commission may be made by the carriers directly with the hospitals. As an alternative, hospital care may be furnished in hospitals erected and maintained by the fund, with the approval of the commission. But, in either case, hospital care for the insured is to be paid for, just as other medical service for the insured will be remunerated.

The second problem, that of paying physicians, is no inconsiderable part of the problem of providing efficient service. It goes without saying that physicians should be adequately remunerated, and that much of the unpaid practice of today, as in the dispensaries, will be compensated under health insurance. The question of what is "adequate remuneration" under a system which will



assure 100 percent collections will arise, but of even greater importance to the medical profession is the basis on which payments are made.

It is the inherent defects in a capitation payment of so much per person per year, which the *New York State Journal of Medicine* points out, that have made "lodge practice" so opprobrious among the medical profession. In other words, it is the basis, not merely the rate of payment, which has encouraged careless work for these lodge patients, for whom payment is received regardless of the services rendered. A search must be made for some basis which will escape this difficulty. Payment per visit, while it avoids this difficulty, since it remunerates the physician in proportion to the services rendered, and while it affords more considerate care for the patient, has the unfortunate practical disadvantage of being very costly. A compromise between these two systems may be made whereby a sum calculated on a per capita basis is divided among physicians in proportion to the services rendered by each. This system presents a known charge to the insurance funds, makes it possible for physicians to check those few who may make unnecessary visits in an effort to increase their income artificially, but unfortunately it decreases the payments to physicians with an increase in work as in time of epidemic. On the other hand, the larger payment for each unit of work done when the services are fewer offsets to a degree the disadvantage of the reverse situation, and this may prove a financial stimulus to preventive medicine.

A fourth possible solution is the employment of a few salaried physicians by each fund, similar to the arrangements now made by many railroads. For this problem the bill has not reached a solution, and obviously, if any proposed solution is to be satisfactory to the medical profession, who are most closely concerned, it must have their cooperation.

The inevitable drift in this country to health insurance, which presents new problems to the medical profession, requires the earnest thought of every physician. Each practitioner should consider what improvements he can suggest over the tentative plans, with the present choice of administrative arrangements, with the provision for a medical officer, and with the close cooperation between hospitals and the insurance system. Each physician should address himself particularly to the as yet unsolved problem of the rate and the method of payment. As a result of such careful thought it will be possible to evolve an organization which not only will do no injury to the profession, but which will improve the medical service available to the American wage-earner.

## UNITED STATES ARMY WANTS MORE NURSES

### War Department Increases Corps to Serve Larger Army—Requirements of the Service

Several base hospitals have recently been established along the Mexican border in order to insure proper medical attention and care for the troops now on duty there. In consequence, authority has been given for a large increase in the army nurse corps, so that these hospitals may be supplied with the necessary number of nurses, and nurses are being appointed as rapidly as possible. Application for appointment should be made to the superintendent, army nurse corps, room 345½ War Department, Washington, D. C. The requirements, in brief, are as follows:

**School.**—Must be a graduate of a school connected with a hospital containing at least 100 beds. If trained in a smaller hospital, training must be supplemented by an additional experience of at least six months in a large general hospital.

**Credentials.**—Moral and professional must be satisfactory.

**Essay.**—On some practical subject.

**Physical examination.**—When practicable, by medical officer of the army, otherwise by family physician.

**Registration.**

**Age,** 25 to 35.

**Citizen.**—If not a citizen, must make declaration to become such.

**Agreement** to serve three years.

The salary of nurses serving in the United States are: first three years, \$50 per month; second three years, \$55 per month; third three years, \$60 per month; thereafter, \$65 per month.

In addition to the above rates, chief nurses may receive an increase not to exceed \$30 per month. Beyond the limits of the United States all nurses will receive \$10 per month additional (except in Porto Rico, Hawaii, and Panama).

The Government will provide maintenance and for the laundering of nurses' uniforms. Nurses will also be allowed cumulative leave of absence, with pay, at the rate of thirty days for each calendar year. First-class transportation and Pullman accommodation will be furnished when traveling under orders, also reimbursement for incidental expenses—meals, fees, etc., not to exceed \$4.50 per day.

### Salvarsan Comes from Germany

Negotiations between the United States Department of State and the German Government have resulted in a large shipment of salvarsan, valued at approximately \$500,000, and was received at the port of New York on May 25. This is practically the first shipment of any quantity to enter the United States since the beginning of the war, and was consigned through Holland and by Dutch transportation to the states. Assurance was given by the British and French Governments that the shipment would not be molested or confiscated.

Dr. H. A. Lowe, who was the largest stockholder in the Southwest Hospital Association at Springfield, Mo., and surgeon-in-chief of the hospital, has sold his interest to George McDaniel, cashier of the McDaniel National Bank. Dr. Lowe is taking post-graduate work in surgery in New York city, and on his return to Springfield in the fall will resume private practice. The Southwest Hospital was opened in 1914 by Dr. Lowe and a number of other physicians.

## ILLINOIS CENTRAL RAILROAD OPENS NEW HOSPITAL

**An Industrial Institution Comparable With the Best General Hospitals of the Present Day—Building of Block Type Where All Agencies for Diagnosis and Treatment Are Conveniently Located—Some of the Details**

BY RICHARD E. SCHMIDT, CHICAGO, OF SCHMIDT, GARDEN & MARTIN, ARCHITECTS

WHILE it is generally admitted that the Continental hospital plans are not adapted to American conditions, yet the fundamental premise on which such a hospital group is planned is one which every hospital administrator and architect holds before him as an ideal. The superabundance, or at least abundance, of general area, and consequent spaciousness of plan and beauty of grounds, are found in few city hospitals. In our larger cities it is rare, indeed, that any hospital has sufficient ground area, but at the new Illinois Central Hospital the officials, with far-sighted judgment, provided a site of unusual extent and equally unusual location. Across the way is Jackson Park, the largest of the public parks of Chicago, better known as the site of the World's Fair of 1893. That stately remnant of the fair, the Field's Columbian Museum, and its lone companion, the picturesque German building, framed by the ever-changing waters of Lake Michigan, are glimpsed through the trees. In the illustrations the site is barren and unattractive, but this will eventually be remedied by careful planting from the plans already prepared. The street frontage is about 470 feet, with an average depth of 225 feet, a total of about two and one-half acres.

While the first unit of the group cares for but 111 patients, yet the area of the site is such that a nurses' and help's home, an additional wing for patients, and two miscellaneous buildings are provided in the group plan, bringing the capacity to about 250 patients' beds and 150 nurses' and help's beds, and this in three-story buildings without crowding. What this will mean during the inevitable expansion, only those know who have faced this recurrent and perplexing problem.

With such a site the possibilities of the group plan are great, and only after careful study was the group plan finally determined on. Of the finished group the main building and power house have been erected, forming a T-shaped plan, the long front of the hospital facing the east, Jackson Park, and the lake with a short wing to the west. Directly west of this wing is the power house and laundry, extending almost to the lot line. The nurses' and help's home is planned for the north end of the lot, and an additional patients' wing is planned for the south end, both of which would have east and west axes. Such future additions

have been provided for in the placing of the initial unit, and additional equipment can be placed in the boiler room, laundry, and kitchen without any structural changes. The operating departments and administrative division are planned large enough for such future growth, or so as to be easily enlarged.

A hospital is necessarily semi-public in function, but for a period, at least of each patient's life, it is "home." To combine the two elements successfully is the problem which constantly recurs to those of us who build hospitals.

In the case of the Illinois Central Hospital it was felt that a slightly stronger emphasis on the public nature of the group was desirable, due primarily to its function as the hospital of what is more generally considered a quasi-public institution—the railroad—and its very conspicuous site. The two conflicting forces have been blended and harmonized to express this locality; its measure of success I shall leave for others to say. The materials are a red brick of variegated color, and considerable texture with Bedford stone trim.

Before proceeding to the description of the plan it would be well to examine the kind of service the hospital will perform. This is, primarily, to relieve the ailments of the Illinois Central Railroad employees—not only local employees, but, where such treatment is indicated, those of the entire system. This, of course, makes it largely a hospital for men, and from 65 to 75 percent surgical. It will, therefore, be no surprise to find that some departments usually found in a general hospital are absent, and that considerable space is devoted to surgical and out-patient treatment rooms and to hydrotherapy and mechanotherapy treatment rooms.

An unusually large amount of recreational or convalescent space is necessary because of the large number of ambulatory patients. The small number of private rooms—the "revenue getters"—should also be noted in this connection; there are but six with communicating bath and four others, two of which are in the isolation department. Temporarily some of the 2-bed wards on the third floor are being used as private rooms.

The entrance lobby has properly been dignified by an appropriate architectural treatment in Tavernelle Claire marble wainscot and fire-place with Tennessee marble floor, delicately decorated





Fig. 1



Fig. 2.

Figs. 1, 2. Illinois Central Hospital, Chicago. Front and side elevations. Note closed sun parlors at the south end, roof promenade, and separation of the power plant from the hospital, with tunnel connecting the two.

plaster ceiling, and plaster panels above the wainscot. The lobby divides the building into three parts; the north wing is used by the ambulance receiving room, out-patients' department, pharmacy, offices, and interns' quarters; the south end for laboratories, x-ray department, hydro and Zander department, chief surgeon's office, and record room; the west section is devoted to nurses' dining rooms, upper part of kitchen, and help's locker rooms. A secondary corridor behind the lobby permits the necessary communication between the out-patients at north and south ends, the treatment room for in- and out-patients of the

building, and to the freight and passenger elevators and stairways, and to the nurses' dining room, without passing through the lobby. A separate entrance from the street has been provided for the out-patient department.

The second floor is devoted entirely to patients, and logically divides itself into three units, each unit having its own toilet and utility rooms, with services common to all at the crossing. Here are the freight and passenger elevators, stairs, serving pantry, nurses' station and locker rooms, clothes chute, and bath and linen rooms. The elevators have been carefully shut off from the

main corridors, so that they will not be annoying to patients. Serving pantries are equipped with brine-cooled refrigerators, steam table, sinks, and built-in cases. Service from kitchen is by means of electric dumbwaiter and the freight elevator adjacent. They are large and well lighted. The nurses' station, so situated as to control the entire floor, is equipped at one side with a large steel medicine case with sink, and an illuminated annunciator box directly in front. The nurses' locker room, functioning as its name implies and also as a toilet room, being directly back of the head nurse's station, is easily controlled and of great advantage in checking nurses "in" and "out." Adjacent to the north utility room is a commodious patients' clothes room, with individual lockers for each bed on the floor and a coat rack in center.

At the end of the west wing is an isolation unit of two small rooms, with connecting bath room. This de-

case of epidemic the entire west wing of 15 beds could be so used. At the south end is a very large sun porch with gray-pink walls and sliding case-ment sash.

One of the most advanced steps in this hospital is in the size of the wards; there are no "hallways," as one patient called them, and the largest ward has but 4 beds. Fire escapes are an integral part of the building, constructed of reinforced concrete and incased in brick walls.

The third floor is much the same as the second floor in plan, except that the west wing is devoted to the operating department and that some private rooms are substituted for wards. Two surgical

dressing rooms are provided at the north end. The operating department is unusually complete, with three operating rooms of varying sizes, with adjoining scrub rooms and other usual auxiliaries. Steel instrument cases of special design are built into the corridor walls, and the nurses' work room is lined with steel cases from floor to ceiling. The entire operating department has a gray vitreous tile floor,



Fig. 3.



Fig. 4.

partment is so arranged that but 1 bed may be used, or it may be expanded to 2 or 5 beds, and, of course, in



Fig. 5.

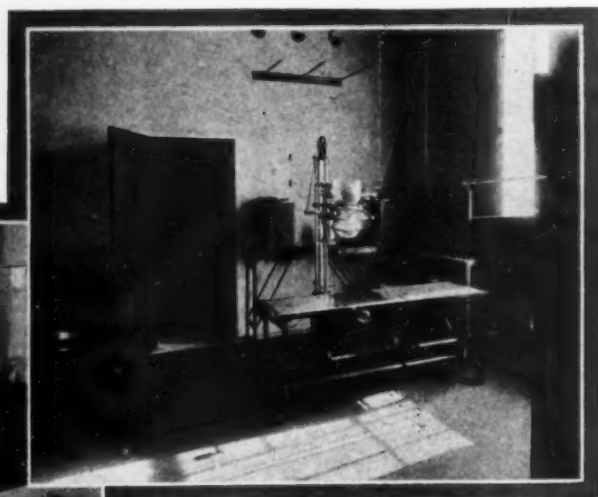


Fig. 6.

with terrazzo base and plaster walls. In the operating rooms the side walls are painted a light olive-green, with a cream-white ceiling, and elsewhere

Illinois Central Hospital, Chicago. Fig. 3—A corner of one of the sun parlors; the very pretty shades can be drawn when required to keep out the glare; the floors are terrazzo, laid plastic in large blocks. Fig. 4—Laboratory of pathology; note complete equipment and roominess for work. Fig. 5—A room in the x-ray department; note careful insulation of wires and separate observation room at right. Fig. 6—Hydrotherapy department; the floors are perfectly watertight, and all apparatus is carefully protected; there is a hot and cold shower, needle spray, douche, hot cabinet, and pack tables.



in the operating department the walls and ceilings are painted cream-white. The operating rooms are brightly illuminated for night operations by rows of lamps and reflectors set in steel boxes outlining the operating room windows at sides and ceilings. The boxes have steel doors glazed with prism glass, and are recessed flush with the walls and ceilings.

For the ambulatory patients a splendid suite of recreational rooms has been arranged on the fourth floor, including a large bil-

laundry, supplies, etc., and connects with the elevator in the power house. In its equipment the power house is complete, including two high-pressure boilers, heating tanks for hot water and for the hot water heating system, with their necessary auxiliaries, a carbon dioxide refrigerating plant and refrigerated water system, garbage burner, mechanical ash hoists, and electric transformers.

It is the intention to lay tracks over the coal bunkers (which are not roofed), and by means of

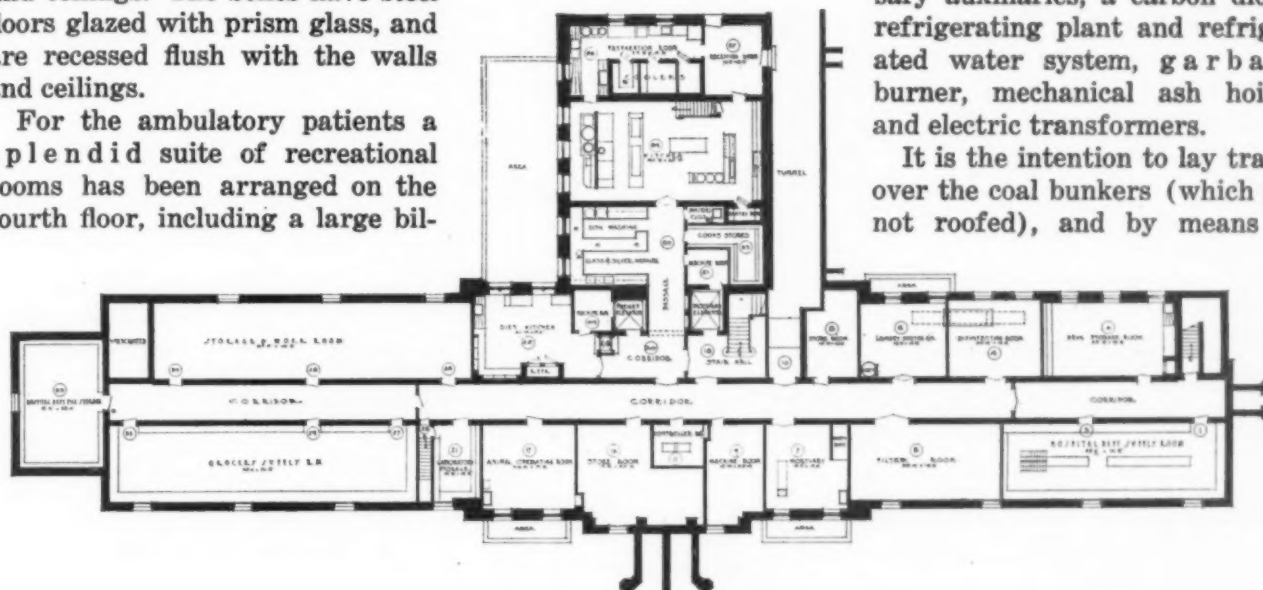


Fig. 7. Illinois Central Hospital. Basement floor plan.

liard room, card room, and solarium. Over the entire wing south of the solarium stretches a quarry-tiled promenade deck. A small serving pantry, toilet room, and fan room complete this floor.

In the basement are the kitchen and its accessories, an unusually liberal amount of storage space, a morgue, animal operating room, drug storage space, etc. The kitchen is a two-story room, with exposure in two directions, insuring the best of natural ventilation, which is supplemented by a complete mechanical exhaust system. The other kitchen rooms receive sufficient light

dump cars unload the coal directly into the bunker. The ash hoist will carry the ashes from the large storage room up to cars on the same level. At the laundry floor level arrangements have been made for the receipt of carload shipments, which can then be taken down the elevator. In cases of emergency, coaches with injured can be brought to the hospital in the same way. The elevator has an opening at top of tunnel, and can be used for the carrying of wagon shipments to the basement. The stack is simply but attractively built.

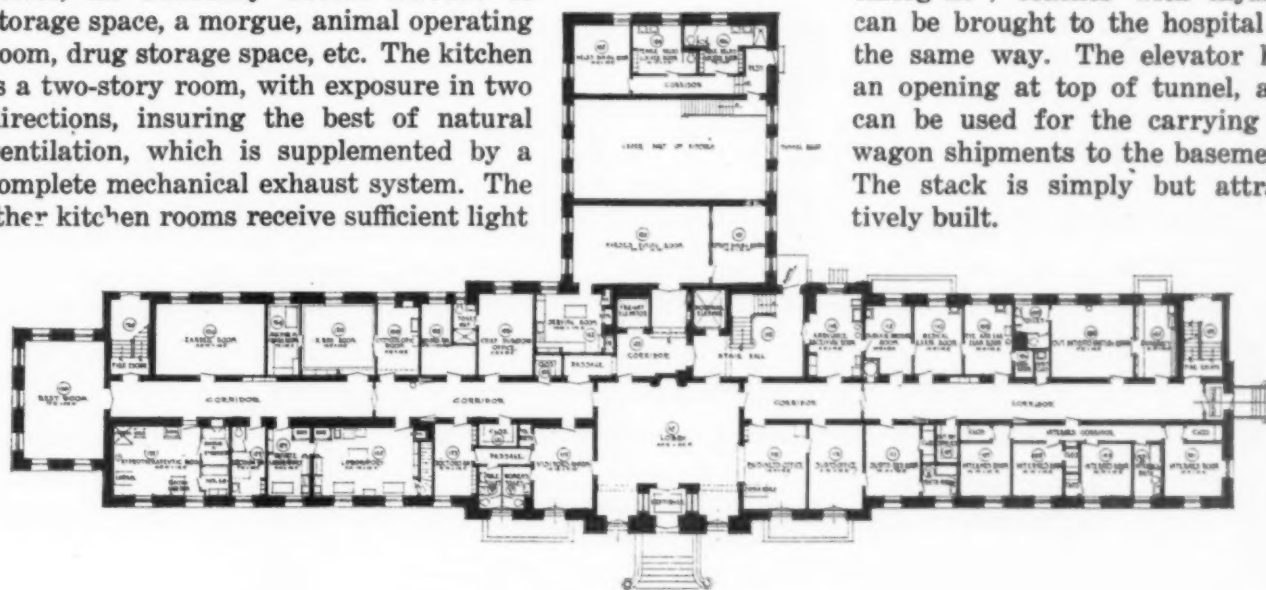


Fig. 8. Illinois Central Hospital. First floor plan.

from windows, which open into large areaways.

The power house is an entirely distinct building, connected to the hospital by a commodious pipe tunnel along the north wall of the west wing. This tunnel serves as a passage between buildings for

To the modern hospital, fireproof construction, coved corners and sanitary base and trim, and flush panel doors, bear the same relation that the electric starter does to the automobile—perfectly workable without it, but extremely antiquated if

omitted. Such items are worthy of comment in a magazine such as *THE MODERN HOSPITAL* only when omitted. But there are many vexing questions of hospital building that do need mention. Such is the perpetual question of floors. In this group battleship linoleum, cemented to a concrete base, is used in all patients' rooms and corridors; in the operating and out-patient departments and hydro room the floors are gray vitreous ceramic tile; in unfinished basement, power house, and laundry the floors are Portland cement, and elsewhere terrazzo is used. With all types of floor, except cement, a terrazzo coved base, with ter-

sorting room, whence it is conveyed to the laundry.

Both elevators and the dumbwaiter in the hospital building are of the push-button type. Special care has been used in the design of this equipment to avoid the annoying disturbances caused by their operation. The elevator machines are bedded on pads of felt and wood, and the controlling switches have been placed in a vault in the basement, remote from the elevator shafts. This care, combined with the isolation of the elevators behind double doors, has practically

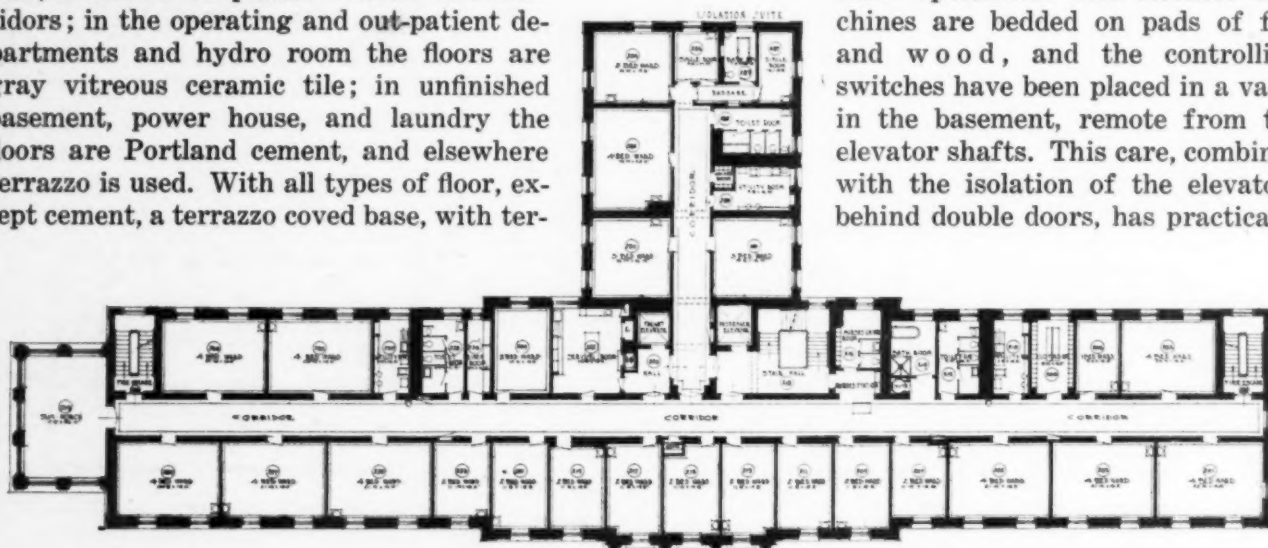


Fig. 9. Illinois Central Hospital. Second floor plan.

razzo border, is used. The door frames are of drawn steel of the flush type, with frame stopping at base and terrazzo continuing through the jamb in lieu of steel frame.

The shelving, wherever possible, is in small sections mounted on casters, so as to be easily moved. Where this was not feasible, built-in steel cases with flush doors, sanitary coved corners, and steel shelves, were used. The instrument cases are a step in advance of the usual steel case, for here the frames and doors are of drawn steel set flush with the plaster, and the side and back of heavy steel with coved corners; the shelves are of plate

eliminated the usual annoyance from this source.

The large refrigerators were erected with the building, and consist of cork block walls inclosed on the exterior with clay tile blocks, finished with wall plaster on the exterior and Portland cement plaster on the interior. The floor and ceiling construction is similar, except that the floor is of terrazzo. The smaller refrigerators were specially made to fit recesses in walls, are lined with white glass and finished in enamel on the outside, and set flush with the plaster. All refrigerators are cooled mechanically.

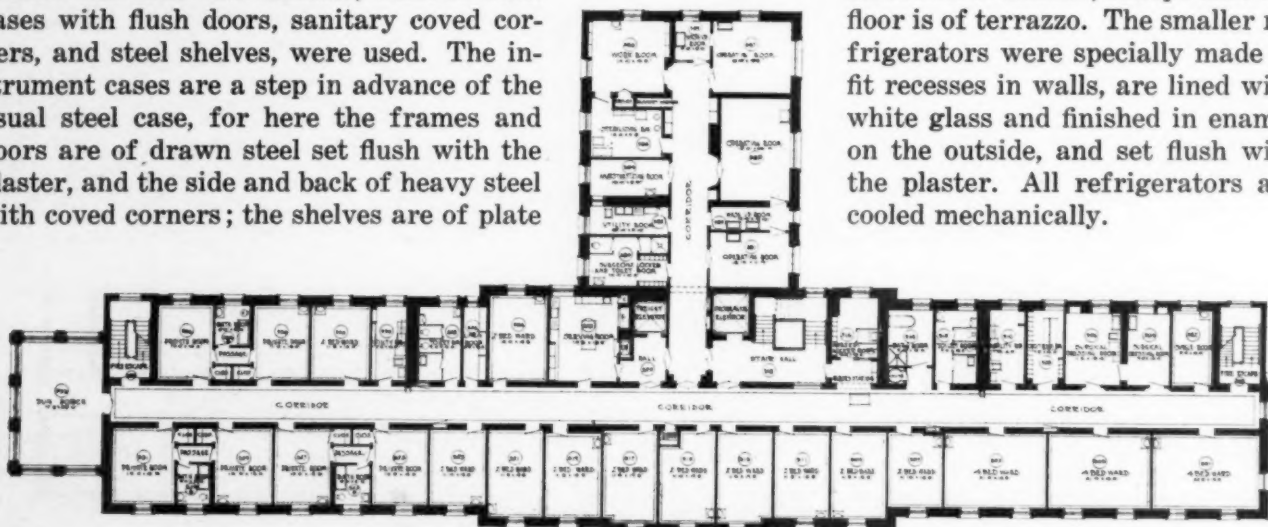


Fig. 10. Illinois Central Hospital. Third floor plan.

glass, supported on showcase brackets, and the doors are of drawn steel. All hardware is heavy bronze and all hinges are invisible.

The clothes chute is glass lined, with openings at each floor, glass ventilator at the top, and washing ring overhead. The terminus is the laundry

The patients call the nurses by silent signal system, with push buttons at each bed, lamps over each door, and an illuminated annunciator box at the nurses' station, with a master annunciator in the superintendent's office. The doctors, nurses, and other hospital officials are called by a



telegraph system, consisting of an ordinary telegraph key in the office, with sounders concealed in flush steel boxes with perforated doors near the end of each wing on each floor.

The question of how much or little mechanical ventilation was solved here by the installation of a mechanical exhaust system, with ducts to all toilet and utility rooms, serving rooms, kitchens, x-ray rooms, etc., is for the future to determine.

All water passes through large quartz filters. Drinking water is twice filtered, refrigerated, and circulated throughout

pared by the architects, thus insuring the perfect coordination between parts which is possible in no other way. It is interesting to note that all sterilizers, except the large dressing sterilizers, are hung from the wall, and are without the usual legs which so interfere with easy and rapid cleansing, and, wherever possible, this principle has been followed. Water closets, lavatories, and slop sinks are invariably bracketed from the wall.

All wood and steel furniture, beds, draperies, shades, etc., were

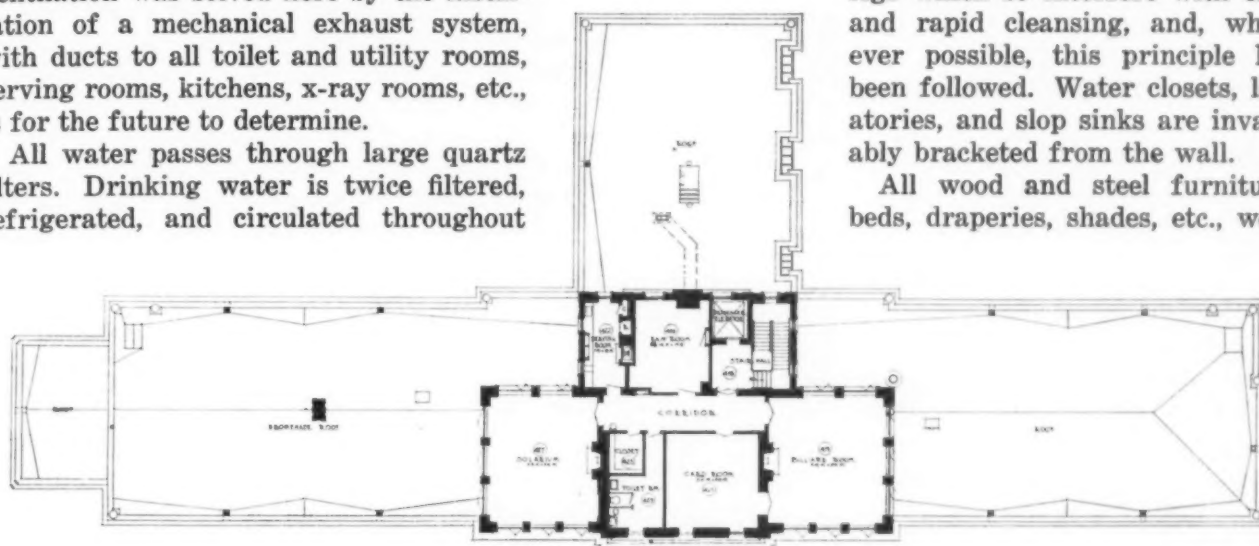


Fig. 11. Illinois Central Hospital. Fourth floor plan.

the house to drinking fountains and to pantries, kitchens, and utility rooms. A special fire pump, a fire alarm system, and a clock system have been

purchased and installed under the direction of the architects. The decision was early reached by the hospital authorities to eliminate as far as



Fig. 12. Illinois Central Hospital. Power house and laundry. A—Basement plan. B—First floor plan. C—Second floor plan.

installed. The heating is by means of forced circulation of hot water.

All kitchen equipment, laundry machinery, hydrotherapeutic equipment, and sterilizers were purchased and installed from specifications pre-

possible the institutional air, and with this end in mind the white bed was tabooed. French gray enamel on steel has been used for ward beds, imitation mahogany on steel on private room beds, and bronze finished brass beds in rooms with

private beds. To harmonize with the French gray ward beds, a quartered oak, stained gray, has been used, while mahogany has been used in the private rooms and in business offices. The color of room painting harmonizes perfectly with the furniture, being in the pastel shades of pink, blue,

green, yellow, and gray. An innovation in the operating room furniture is the use of French gray finish instead of the usual white.

The illumination is by means of semi-indirect bowls in patients' rooms and direct illumination elsewhere.

## INDUSTRIAL WELFARE WORK A FACTOR IN MODERN MANAGEMENT

### What the Cadillac Motor Car Company Has Done to Improve the Working Conditions of Its Employees—How the Welfare Idea Grew From a Small Beginning to a Large and Methodical System—Its Beneficiary and Medical Plans

By J. M. EATON, MANAGER OF THE WELFARE DEPARTMENT

THE growth of the automobile industry has been so phenomenal, the rapidity with which motor car factories have been enlarged and extended and the speed with which fortunes have been amassed, have been so great that the general public, familiar only with the method of building big business by a slow and painstaking process, has come to believe that the great heads of these enormous enterprises must necessarily be more or less business buccaneers, fighting madly for supremacy, with little thought of the means used to gain the end desired—great wealth. Their attention has been called at various times and through various agencies to the spectacular achievements of the industry, to the vast number of automobiles turned out in a given period of time, the speed with which a motor car can be assembled, the thousand and one accomplishments of those cars which are advertised for their prowess at hill climbing or racing, and to the tremendous volume of the annual dividends paid by certain of the more successful companies in the field, while little or nothing has been said or published regarding the more intimate things of the business or the inner organizations and close cooperation between individuals, between employer and employee, that has made possible an industry so vast in its proportions as to be nothing short of awe-inspiring. Welfare or sociological work has within the past few years become so important a factor in the administration of these great organizations as to demand recognition and the careful consideration of all concerned.

It cannot be said that welfare work as practiced in manufacturing establishments of the present day is either wholly philanthropic or wholly economic. It may have been prompted either by a desire on the part of the employer to do something philanthropic, or solely because the employer had been told, or believed himself, that such work would bring him a profitable return in

increased efficiency and in a stabilizing of labor conditions in his plant. Whatever may have been the incentive for engaging in such activities, the result has been the same—a tangible saving to the employee and profit to the employer, though it is difficult to measure in money the profit accruing to the latter and a comparatively easy matter to compute in dollars and cents the saving to the former. In its relation to accident prevention, to increased efficiency, and to the minimizing of time lost through sickness, it represents to the workers of the country a saving of unbelievable sums of money annually. On the other hand, the physical, mental, and moral condition of an employee has much to do with the problem of accident prevention and the question of increasing individual efficiency.

Organized welfare work in the plant of the Cadillac Motor Car Company dates back about six years, having been given a name and place in that organization in 1910, it being apparent to the management that the unorganized manner in which the problem had previously been handled was not bringing to the men in the factory the measure of good result desired or to be expected from the amount annually expended. Later numerous requests from the employees for some sort of organized effort, in which they might participate, to eliminate the too frequently burdensome practice of "passing the hat" in cases of sickness or death among fellow-workmen, resulted in the forming of a benefit society. Still later an intimation on the part of many workmen that they would welcome anything which would enable them to secure a noonday lunch without having to patronize either the nearby saloon or the more or less high-priced public restaurant resulted in the present shop restaurant, with its variety of wholesome, well-cooked food at prices representing the actual cost of production. These and other activities were finally grouped under one head, and as a result we find the present welfare organization



divided into seven divisions. These divisions are accident prevention, fire prevention and sanitation, accident relief, benefit society, legal aid, restaurant and lunch counters, and accident claims.

The division of accident prevention is in charge

necessary, or uncalled for. The decision of this committee is final and binding on all concerned.

The division of fire prevention is so closely allied with that of accident prevention as to make it almost impossible to discuss the work of one

without bearing to a very large extent on the work of the other. This division is in charge of a fire marshal, who is a retired captain of the city fire department, and who has under his direction two assistants, whose duty it is to make periodical surveys of the works and to recommend to the foremen and department heads such steps as are necessary to eliminate or minimize the fire hazard. Orders covering fire hazards and methods to be pursued in eliminating such hazards are similar to those in use by the safety engineer, and an appeal from the decision of the fire marshal is to the same committee as that to which the safety engineer

makes his appeal, except that in cases of fire hazard the committee is known as the Fire Prevention Committee. The fire marshal looks not alone to the elimination of fire hazards, but is



Fig. 1. Cadillac Motor Car Company, Detroit. Plant No. 1. Main room of surgeon's office.

of a safety engineer, who, with his two assistants, has charge of all work looking to the elimination, in so far as is possible, of work accidents in the various plants of the company. He designs and installs such mechanical safeguards as may appear to him proper, and is the arbiter as to what is or is not safe manufacturing practice. On having called to his attention an unsafe condition which may be remedied by the installation of mechanical devices, he and his assistants proceed to the designing, building, and installation of such guards. Hazards which may be eliminated by some action on the part of foreman or superintendent are called to the attention of such foreman or superintendent by a written notice, which, in addition to suggesting what may properly be done in the matter, indicates the limit of time in which the hazard must be abated. Failure

on the part of the foreman to comply with the order of the safety engineer may bring him before a safety committee composed of factory executives, where he is given an opportunity to show, if possible, that the order is unreasonable, un-



Fig. 2. Cadillac Motor Car Company, Detroit. Plant No. 1. Type of equipment and eye treatment room in surgeon's department.

also the sanitary inspector for the plant. He has charge of the fire brigades, must approve the various types of gasoline and kerosene containers used throughout the works, and is authorized to order done such things as are obviously necessary

to the preservation of the plant, its equipment, and the health of the employees.

One of the most interesting divisions of the work in this organization is that of accident relief. This division is in charge of a chief surgeon, two assistant surgeons, and five trained male nurses, the most of whom are located at the works' emergency hospital at the main plant. Here are treated not only those injuries which are sustained by the men in the course of their employment, but also injuries suffered on the street and while at home, and a very large number of dispensary or sick cases.

The emergency hospital equipment is of modern type, the interior of the rooms being finished in white enamel, with granolithic floor, and provided with individual white porcelain pedestal wash stands, with foot control of hot and cold water and waste. A steam sterilizer capable of bringing cold water to the boil in forty seconds, and an electric dry sterilizer, provide the means for keeping instruments and dressings clean. A modern white porcelain operating table and white enameled steel furniture not only add to the attractiveness of the rooms, but serve also to make the whole outfit clean and free from danger of pus infections. An eye operating room is equipped with all the electromechanical apparatus necessary for the proper treatment of eye injuries.

In this hospital in a single year, in addition to the large number of minor injuries treated, there were cared for a total of 37,757 so-called dispensary cases, being cases of employees slightly ill who called for advice and medicine. In one winter there were treated more than 4,300 cases of grip, 6,250 cases of headache, and almost 800 cases of toothache. It is interesting to note, however, that during a twelve-month period only 437 cases of injury causing disability for one working day or more were treated, although in the same period there were treated over 40,000 cases of slight abrasions and more than 9,000 cases of foreign bodies in eyes, these eyes having under the Workmen's Compensation Act a potential value of from \$3,500,000 to \$9,500,000. The men are encouraged and urged to take their minor injuries to the doctor's office, thus minimizing the danger from infections, as well as permitting the doctor to ascertain the underlying cause of the accident and to advise the employee as to his general health, etc. In this manner the attention of a man is called to the danger of certain unapproved practices, and the importance of care and good judgment in preventing similar injuries.

Probably no division of the welfare work in the plants of this company has proved so great a di-

rect benefit to the employees as has the mutual aid or benefit society, organized January 1, 1913, which has paid to its members during the first three years of its existence over \$35,000 in sick, accident, and death benefits, accumulating in the same period a cash surplus of over \$12,600. Membership in this organization is voluntary, and about two-thirds of the entire force have taken advantage of the protection afforded through membership in it. A payment of 10 cents per week entitles a member to benefits for sickness or accident disability amounting to \$1 per working day over a period of twenty-seven weeks, or about six months, together with a death benefit of \$150. There is no initiation fee. The company pays all expenses of administration, so that every cent paid in by members goes to the payment of benefits and to the accumulation of a surplus. The society is in charge of a superintendent, who is also manager of the welfare department, and it is governed by an advisory committee composed of twenty employees of the company, ten of whom are selected by the management and ten elected annually from among those employees in the works who are members of the society. The superintendent is in general charge of the activities of the society, and makes all adjustments and settlements with sick or injured employees. An appeal may be taken from his decision in any matter to the advisory committee, and its judgment is final.

Membership in the benefit society means more, however, than the mere payment of sick and accident benefits, for the company, in appreciation of the desire of the employees to protect themselves against loss of time through accidents or sickness, has conditioned that certain other privileges shall be theirs if requested. A physician is employed, and devotes his entire time to calling on and treating medicinally those members who are sick and unable to go to the plant hospital for treatment, and in many instances this physician treats not only the sick employee, but members of his family as well, making no charge for the service. Those employees who are physically imperfect and require corrective surgical treatment, such as operations for hernia or appendicitis, are placed in a city hospital at the expense of the benefit society, and are there operated on by the company's chief surgeon. Endowed beds in a local tuberculosis sanatorium are open to members afflicted with the white plague who either do not see their way clear to go into a more favorable climate, or whose cases have become so far advanced as to make the moving of them to such climate unadvisable. Those employees who are tubercular, and desire to go away, are sent to a sanatorium in



New Mexico, where they are cared for by a physician employed by the company, the expenses for room, board, and nursing being borne by the company, the benefit fund bearing the expenses of such items as transportation, medicine, and par-

The division of legal aid is in charge of an attorney, whose services are at the call of the members of the benefit society, and who advises them in all legal matters in which they are doubtful. Through him foreign-born employees are assisted in securing citizenship papers, and all employees who so desire may secure assistance in legal matters. Employees are assisted in their negotiations for the purchase of property, abstracts of property are examined, and in case of garnishment proceedings they are advised and assisted in the adjustment of differences between themselves and their creditors. The welfare attorney does not in any case appear in court for an employee, but will in cases where it seems necessary for the member to appear in court refer him to a practicing attorney known for his willingness to deal squarely and fairly with clients thus sent to him.

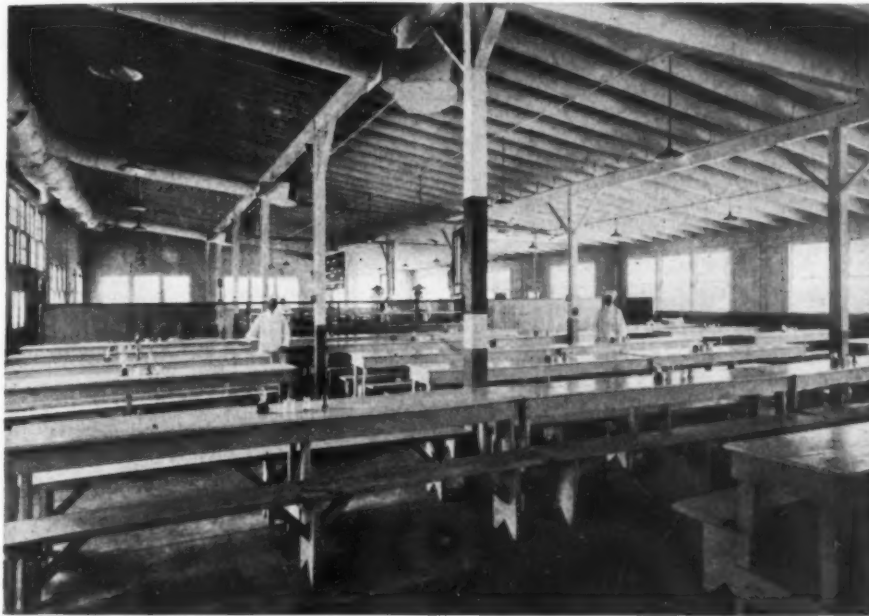


Fig. 3. Cadillac Motor Car Company, Detroit. Plant No. 2. Section of main restaurant. All portions are sold here at 3½ cents.

tial support of the family left behind. The benefit society membership thus affords the employee low-priced protection against loss of time, and an interest in his physical welfare which could not be bought through the payment of any premium to any other sort of insurance society. It teaches its members the value of foresight in preparing against the inevitable rainy day. It encourages contentment by teaching self-reliance, for the protection afforded them through the medium of the society is a return from the money they have themselves earned and invested. It teaches them the value of personal hygiene and right living through the medical and surgical department maintained by the company as a part of the society's administrative organization. It teaches independence and discourages dependence, and it is fast becoming a fact that in these works an employee who fails or is unwilling to become a member of this organization is considered by his fellow-employees as lacking the proper mental equipment of a working business man.

As previously stated, the desire on the part of the men who have some place where a clean and wholesome lunch might be purchased at a reasonable figure brought about the



Fig. 4. Cadillac Motor Car Company, Detroit. Plant No. 2. Section of main restaurant. All portions are sold here at 5 cents.

present division of restaurants and lunch counters. In the beginning the effort in this direction was confined to the serving at noon, and in the evening for overtime men, of a thick soup, or meat stew, in quart cups, a quart of the stew and

two slices of bread being sold for 6 cents. This was delivered to the various departments in the shops on trucks, the men eating at their benches or machines. This service rapidly became so popular as to demand some sort of a room in which the men might be served with greater dispatch and more comfort to themselves. Part of a large warehouse was, therefore, converted into a restaurant, equipped with long tables and benches painted a light gray and covered with white oilcloth. A counter in the center of the room was made the distribution point, and, it being found that a quart of the stew being served was more than the majority of the men required, the quantity was cut in half and sold for 3 cents. From this beginning has grown in a year and a half the present two large restaurants, one housed in

whereby those who wish may secure superior service by paying 5 cents per portion for the same food that is sold for consumption at the oilcloth covered tables at 3½ cents. One side of this room is equipped with polished oak tables and steel frame chairs; here napkins are provided, iced water is on the tables; ketchup, vinegar, and mustard are provided; and the coffee and milk, instead of being served in bottles, as is done on the lower-priced side, are served in cups and glasses, and the patron has an opportunity to sweeten his coffee himself with loaf sugar, and is given a pitcher of cream, to be used or not, as he pleases, instead of having the cream and sugar previously put into the coffee, as is ordinarily done where it is sold at the lower price.

Contrary to expectation, this section of the restaurant has proven extremely popular, and is patronized not only by office help and foremen, but by the rank and file of machine shop and foundry laborers.

In connection with the restaurant activities, and in the belief that a little relaxation and refreshment at those hours of the day when industrial accidents are most frequent would tend to minimize the number and seriousness of such accidents, the practice of selling milk in pint bottles to the employees has been adopted at these hours. Between 9 and 9:15 o'clock in the morning and from 3 to 3:15 o'clock in the afternoon milk and butter-



Fig. 5. Cadillac Motor Car Company, Detroit. Plant No. 2. Service section of main restaurant.

its own building, and, in addition, the four lunch counters operating at the noon hour.

A steward is in general charge of the service, an experienced chef in charge of the kitchen, and a storekeeper and twenty-one men complete the organization. About 1,000 men secure their noon-day meal at one or the other of the restaurants or at the lunch counters. Both restaurants are operated on the cafeteria plan, and, in addition to the meat stew which still forms the main article of diet, there have been added side dishes of various kinds—salads, fruit, pies, coffee, milk, tea, etc.—each portion being sold for one ticket, which represents a value of 3½ cents. A strip of seven tickets is sold for 25 cents.

In the No. 2 restaurant, which is the latest to be opened and which is housed in a concrete floored building 50 by 100 feet, the interior of which is painted white, a plan has been adopted

milk are on sale at various counters throughout all the plants, the men being permitted to leave their work for the purpose of purchasing and drinking it. This milk is the best quality procurable, and after having been chilled is sold at 3½ cents per pint, which is a trifle less than its cost plus the handling. During a single year almost 456,000 pints of milk were sold in this manner, together with 265,000 pints of coffee sold at the noon hour. With the noon sales of milk and coffee there were sold in the same period almost 80,000 pies and more than 200 barrels of apples. The restaurant division of the welfare department alone does a gross business approximating \$50,000 annually. It is so handled that the loss of the company is comparatively small.

It is the belief of the management that by presenting to the men an opportunity to secure for themselves at cost, or a trifle under cost, such ad-



vantages as it is possible to secure through the medium of the welfare department, the number and seriousness of the shop accidents are reduced,

the men are in better physical and consequently in better mental condition, and the individual efficiency of all is materially increased.

### YOUNGSTOWN SHEET AND TUBE COMPANY'S HOSPITAL

**Conveniently Arranged and Handsome Edifice Is Initial Agency in Health Work For Large Number of Employees—Service Rendered Is Intensely Practical**

By R. J. KAYLOR

**T**HE new emergency hospital of the Youngstown Sheet and Tube Company is located a short distance from the main entrance to the works, and is not inside of the plant proper. The site selected was chosen because of its convenience and the fact that it was admirably suited to an

porting. The interior finish is of oak and birch, and the hardware used is of simple but handsome design.

The arrangement of the first floor is such that the building is divided into two portions—one for major first aid cases and one for patients visiting the hospital for treatment or examination. In accordance with this plan, one entrance is provided for the ambulance, while another is for the patients above referred to. The front entrance is for attaches and visitors.

A portion of the basement is devoted to the bath or clean-up room, and a special system is provided by which privacy is secured. The physical examination room is also on this floor, and the remainder is given over to a well-equipped laundry, heating and ventilating apparatus, and similar purposes.

The first floor contains a waiting room, dispensary, and accident clerk's office, all arranged so that entrance is secured through a cor-

ridor from the wide stairway leading to the basement. This floor also contains the operating room, which is provided with the most modern equipment and arranged with a special view to sanitation. This room is tiled 8 feet from the

institution of this character. Being outside of the works, it will simplify the admission of patients who are not actually employed by the company, it being the intention to extend the benefits of the institution to the families of employees as far as this may be possible. Abundant ground is a feature of the site.

The building is two stories in height, with a basement and attic. It is constructed of brick, steel, and cement, with a waterproof stucco treatment for the exterior walls, which are 85 by 40 feet in dimensions. The construction is fireproof throughout, and the heating, plumbing, and ventilation are the result of expert study of the problems involved. Floors are of terrazzo, with cove base, and are laid on concrete, with steel beams sup-

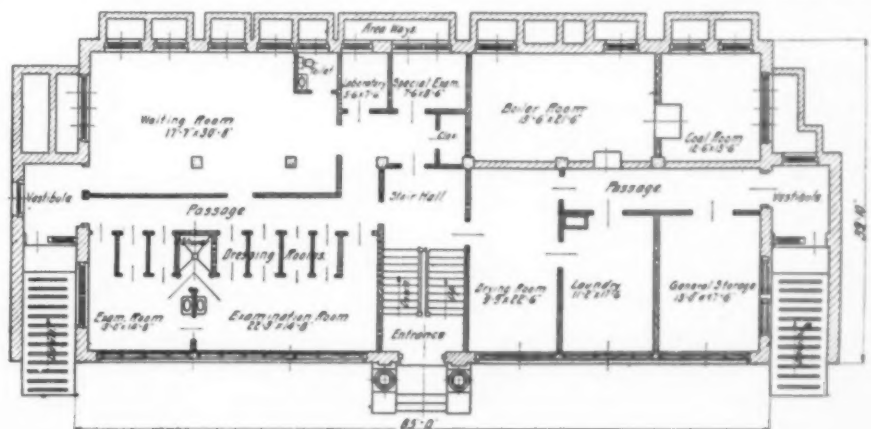


Fig. 2. Youngstown Sheet and Tube Company's Hospital. Basement floor plan.



Fig. 1. Youngstown Sheet and Tube Company's Hospital.

floor, and provided with terrazzo floor and copper drains, so that it may be flushed with hot water and steam. It is lighted from the north in the most approved manner. Communicating with the operating room are the doctors' lavatory and the sterilizing room. The physician's private office and a well equipped x-ray room, with a 3-bed ward and general bath, complete the installation on this floor.

The second floor is arranged for the accommo-

The erection and equipment of the new hospital was undertaken with the purpose of extending to the employees benefits beyond the mere treatment of emergency cases, and has been carried out with this object in mind. While serious cases or either injury or illness will be sent to the base hospitals, where they can be given more efficient treatment, the plan is to furnish through the emergency hospital medical and surgical treatment for all cases of a minor nature among em-

ployees, and thus avoid the ill results so often accompanying neglect of these cases. The co-operation of the visiting nurses is expected to render this work most effective, and aid greatly in the humanitarian objects sought to be accomplished.

The Youngstown Sheet and Tube Company has always shown the most advanced interest in the physical well-being of its employees, and this hospital is an expression of this idea.

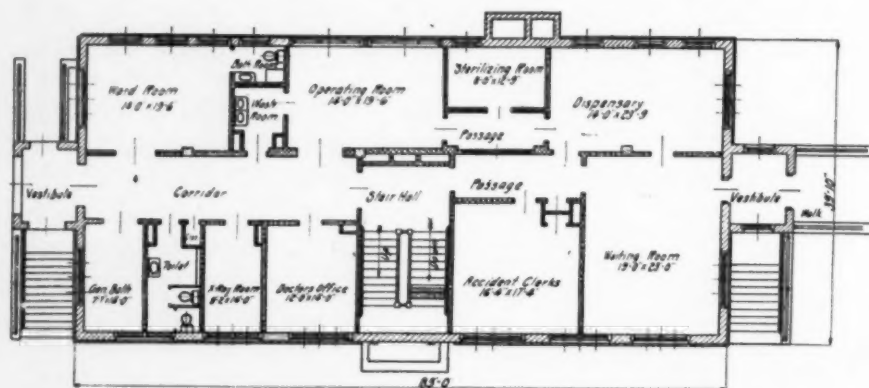


Fig. 3. Youngstown Sheet and Tube Company's Hospital. First floor plan.

dation of accident clerks, nurses, and physicians. The location of the hospital near the plant was considered advisable to make provision for the residence of the physicians and nurses, at least temporarily, and experience has shown that the accident clerks can work to best advantage in close touch with the physicians. This floor is provided with a common living room, bath, and bed rooms for the purpose outlined. The accident clerk's office occupies one end of the floor, and the other is arranged for a ward, and will be used by the visiting nurses for the present.

The hospital is not intended for the treatment of permanent cases of either injury or illness, these being, as soon as possible, sent to base hospitals at Youngstown; but from the emergency hospital will be extended to the employees that medical treatment which is necessary to complete recovery from minor injuries, as well as that service which will tend best to provide for the general health and physical well-being of the men and their families. In connection with this work a number of visiting nurses will be employed, and they will keep in close touch with the homes of the men at work in the mills, a large number of whom are of foreign birth, rendering to them such service as has been found most efficient along the line of extended welfare work.

The company recently vaccinated about 7,000 of its employees without charge, an epidemic of smallpox threatening the community, although no cases had been found among the men employed in its mills. This treatment was also given free of charge to all members of employees' families, who were only too willing to help in this precautionary effort, and the result was the stamping out of an epidemic that otherwise might have been serious.

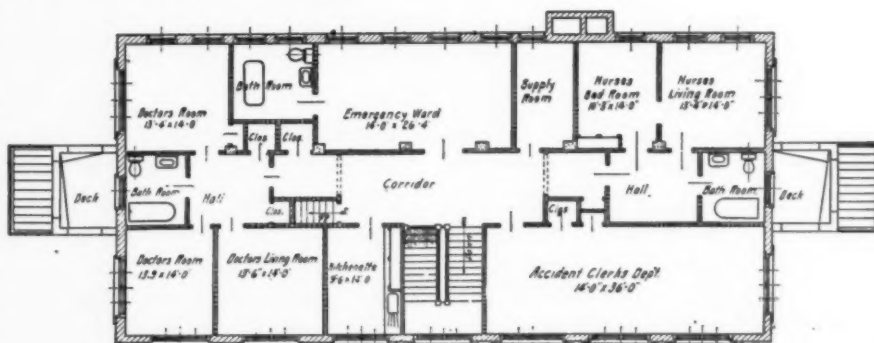


Fig. 4. Youngstown Sheet and Tube Company's Hospital. Second floor plan.

A hospital is being built at Atlantic, Ia., by the Atlantic Hospital Association. It will be a three-story and basement brick and stone structure, 82 by 37 feet, and will have a capacity of 30 to 40 beds. The cost, including heating, plumbing, and wiring, will be approximately \$25,000. On the first floor will be located the superintendent's office, a large waiting room, a diet kitchen, and several private rooms for patients. The second floor will be taken up almost exclusively by private rooms and wards. An operating suite, separate wards for men and women, nurses' quarters, and a solarium will make up the third floor. In the basement will be the kitchens, the laundry, and a few nurses' rooms. An electric elevator will run from the basement to the top floor.



## CLOAK, SUIT, SKIRT, DRESS, AND WAIST INDUSTRIES

**Development of the Welfare Work of the Joint Board of Sanitary Control of New York City in Certain Industries—Sanitary Standards Carefully Prepared and Systematically Introduced—Caused Laws to Be Passed for the Safeguarding of Workers**

By GEORGE M. PRICE, M. D., DIRECTOR

THE protocol is based on the fundamental principle that the welfare of an industry is the concern of the manufacturers, the workers, and the public, and therefore the Joint Board of Sanitary Control represents these three elements, the organization of the board being based on the interdependence of these interests in industry.

Beginning in 1911 with a simple investigation of the sanitary conditions of the shops in the cloak and suit industry, and, later, with the establishment of sanitary standards accepted by the industry, the work of the board has gradually extended until it has embraced a number of functions in the self-sanitation of the industry.

The work of the board has progressed and developed. It began with a formulation of the sanitary standards, carefully prepared by experts in cooperation with the members of the board. The results of the inspections instituted by the board, and supported by the manufacturers' association and the union, have effected a very decided improvement in the condition of the factory. The board has improved conditions not only from a sanitary point of view, but from the point of fire prevention. The organization it established has enabled the industry to use the best expert service to comply with the sanitary standards embodied in law. The department in charge of fire drills has helped manufacturers to comply with the law. Moreover, the improved sanitary conditions in garment working have been of great service to the machinery of the government concerned with the enforcement of legal sanitary standards for factories.

A very important step in the development of the board has been a systematic attempt to give the workers a physical examination and to consider the effect of industrial conditions on the health of the workers. Another great advantage of this representative industrial management, in my judgment, is that the results have been brought about not only through effective machinery established by the board, but through the gradual and increasing recognition of the need and importance of these standards.

The board has gradually awakened an intelligent public opinion among the workers and manufacturers, which has greatly aided the board in

enforcing standards. This is one of the chief advantages of representative industrial management. The enforcement of standards is no mere mechanical process—it is a process of education. We are confident that the achievements of the board will result in the extension of this method of sanitary control in other industries. The work of the board, therefore, has not only a local, but a national, interest.

The scope and functions of the board are at present controlled by five distinct, yet interdependent, departments or divisions:

- A. Sanitary inspection.
- B. Education.
- C. Fire protection.
- D. Medical work.
- E. First aid and nursing service.

#### A. SANITARY DIVISION

##### 1. Scope and functions of the sanitary inspection of shops:

- a. Annual.
- b. Semiannual.
- c. Division of shops into class A, B, C, and D.
- d. Monthly reinspection of B and C shops.
- e. Weekly inspection of D shops.
- f. Inspection of new lofts leased by manufacturers.
- g. Investigation of complaints.
- h. Advice to manufacturers in complying with orders from the labor and fire departments.
- i. Certification of shops complying with the standards of the board.

##### 2. The work done:

	1911	1912	1913	1914	1915 <sup>1</sup>
Inspections and re-inspections made.....	7,286	12,657	8,982	9,703	4,288
Complaints investigated .....	107	168	111	79	101

The following are the sanitary standards of the Joint Board of Sanitary Control in addition to the provisions of the municipal health and fire departments and to the labor laws of New York state:

1. No cellar or underground story the ceiling of which is less than 7 feet above the adjoining ground may be used as a workshop.
2. Workshops located in rear houses, attics, or converted tenement houses must have a special permit from this board.
3. All machines and other appliances which are in use must be placed so as to have sufficient natural or artificial light at all times, the board to determine in individual cases in regard to all complaints concerning insufficient light.

<sup>1</sup>To October 22, 1915.

4. All lights must be so placed as not to glare in the eyes of the workers; they must be at a distance from the operative and well shaded.

5. All shops should be properly aired during noon pauses by opening windows and doors. During the hot

of the benefits of better sanitation of the shops and health of the workers.

Our methods of inspection are different from the ordinary methods of inspection of state and

municipal departments. Inspectors are instructed to establish and maintain friendly relations with employers and with workers. No attempt is made to come in at unexpected times to find violations and to penalize manufacturers for them. The function of the inspectors is to prevent violations instead of merely detecting them. The principle which is emphasized is not detection of sanitary crimes, but prevention.

Since 1914 a lecturer has been engaged whose duty it is to visit shop meetings, talk to the workers on sanitary matters at these meetings, and also to conduct noon lectures in the shops.

Various bulletins issued from time to time and distributed in large quantities among the workers also tend to spread education on sanitary and health matters. During 1915 a special bulletin on fire protection was issued for the manufacturers, and a special



Fig. 1. Joint Board of Sanitary Control, New York. Lunch room for employees.

season in the summer there should be placed in the shop a sufficient number of electric fans for the purpose of ventilation.

6. No irons heated directly with coal or gas tubes may be allowed in the shops. Wherever gas irons are used, they must be supplied with air pressure; they must be properly adjusted and the pipes made gas-tight.

7. Each shop should have a special caretaker for the cleaning of floors and water closet apartments.

8. Each shop should be provided with an approved first aid medical service kit.

It is recommended that proper and sufficient lunch accommodations should be provided apart from the work benches and machines, the owner to be responsible for the cleanliness and sanitary condition of the lunch counter.

#### B. EDUCATIONAL DIVISION

In its first annual report the board emphasized the importance of educational activities and propaganda as a basis for the enforcement of labor laws having to do with safety and sanitation. This policy was adhered to during the last five years, the greatest attention having been paid to the spread of knowledge among manufacturers as well as workers of the importance and

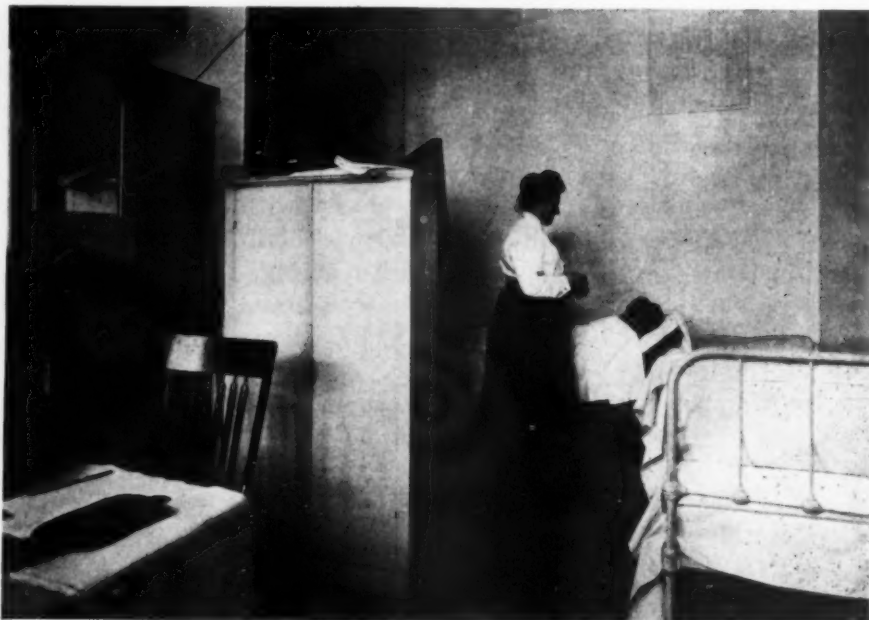


Fig. 2. Joint Board of Sanitary Control, New York. Approved rest and emergency room in factory.

bulletin, entitled "Workers' Health Bulletin," was issued in English, Yiddish, and Italian, and 70,000 of these bulletins have been distributed among the workers in the shops.



1. Scope and functions of the educational division:

- a. Interviews with employers.
- b. Conferences with labor leaders.
- c. Friendly talks with manufacturers and workers.
- d. Annual reports.
- e. Irregular bulletins.
- f. Lectures on sanitary subjects before sections and locals.
- g. Noon lectures in shops.
- h. Lectures at shop meetings.
- i. Appointment of sanitary shop committees.
- j. Official exhibits.
- k. Papers and talks at conferences and conventions.
- l. Papers and letters in trade press.
- m. Interviews with employers.

### C. FIRE PROTECTION DIVISION

Careful attention has been paid by the board since its organization to the work of fire preven-

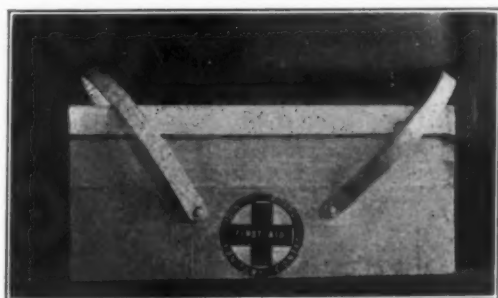


Fig. 3. Joint Board of Sanitary Control, New York. Compact first aid case, closed.

tion and the safeguarding of the workers against the dangers of panics and fires in the shops. Immediately after the general inspection of the industry in January and February, 1911, and before the fires of the Wolf and Aasch building during that fateful winter, the board presented to the municipal authorities a list of buildings in which

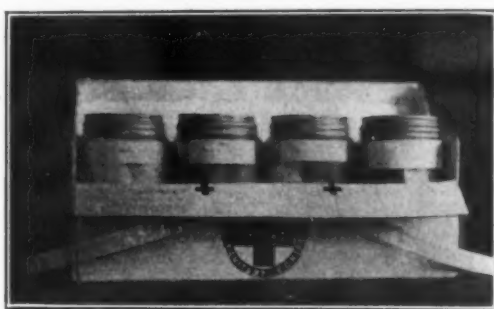


Fig. 4. Joint Board of Sanitary Control, New York. First aid case, open, showing jar dressing containers.

unsafe conditions were found by its inspectors, and the attention of these authorities was drawn to the fire dangers in these buildings. Since its organization the board has made strenuous efforts to combat the indifference of the public to the important problem of industrial fire protection, and has worked with the various authorities

in the efforts for the safety of buildings and for the prevention of the results of panics and fires. The inspections made by the board were directed to discover the defects in buildings which would make them unsafe in case of fires, to the inadequacy of exits, to the improper placing of fire escapes and drop ladders, to the abolition of fire trap exits, to the widening of aisles in shops, and to the increase in the protective measures against fires in buildings.

The board was instrumental in having passed by the Legislature the bill creating the New York State Factory Investigating Commission, and there has hardly been a movement in the state and city for the safeguarding of workers which has not had the active participation of the board or some of its members.

When the Legislature passed the fire drill law, imposing the duty on the owners of shops to conduct monthly fire drills in their shops, the board organized a fire drill division, with a force of drill masters, and has succeeded in inducing 282 manufacturers (322 shops) to conduct and maintain monthly fire drills. While this law is practically a dead letter outside of our industries, and there are hardly 100 fire drills conducted throughout the whole city in other industries, the fire drill law is obeyed in at least 400 factories belonging to our industries. Beginning with 1916, arrangements have been made with the two manufacturers' associations to maintain drills in the shops of each and every one of their 600 members.

1. Work of the fire drill division:

- a. Monthly fire prevention inspection.
- b. Initial instruction of employees as to exit and escape.
- c. Monthly fire drills.

	1913	1914	1915
Shops having fire drills conducted....	259	334	322
Total number of drills conducted.....	640 <sup>1</sup>	3,580	2,779 <sup>2</sup>

### D. MEDICAL DIVISION

Early in 1912 the board decided that the sanitation of the industry could not be carried on successfully without an endeavor to improve the health of the workers at the same time. In order to ascertain the health conditions among workers in the trade, a preliminary examination of 800 workers was made in 1912, which investigation disclosed the prevalence of many physical defects among workers in the trade and a greater incidence of pulmonary tuberculosis than should be expected in the industry. Since that time an agitation has been strenuously carried on among the various locals belonging to the International Ladies' Garment Workers' Union to establish physical examination of workers, to induce the various

<sup>1</sup>From October 1, 1913.

<sup>2</sup>To October 1, 1915.

locals to adopt some means by which sick members could be assisted, and to devise a scheme by which members of the unions suffering from tuberculosis could be taken out from their shops and be properly treated during a certain stage of their disease.

In March, 1913, Local 35, consisting of 10,000 members of the Pressers' Union, was the first to adopt a tuberculosis benefit provision, which consisted in taxing members of the union \$1 annually and assisting each member of the union suffering from tuberculosis with \$150 to \$200 for the cost of a sojourn of from ten to twenty weeks at a sanatorium in the Catskill Mountains. Since that time Local 9, consisting of 12,000 tailors and finishers, and Local 23, consisting of 7,000 skirtmakers, have also adopted a tuberculosis benefit provision. In 1914 Local 35 also adopted a sick benefit provision, paying \$5 a week for ten weeks to members of the union suffering from some acute disease.

The examination of all members of the union and the supervision and control of the various tuberculosis and sick benefits in the locals is done by the medical division of the joint board of sanitary control.

1. Scope and functions of the medical division:

- a. Physical examination of any member of the Unions.
- b. Examination of candidates for admission to Locals 35, 9 and 23.
- c. Examination and supervision of sick benefit of Local 35.
- d. Examination and supervision of tuberculosis benefit of Locals 35, 9 and 23.
- e. Supervision and control of tuberculosis members of Locals 35, 9 and 23.
- f. Special dental examinations and advice.
- g. Special eye refraction examinations and advice.
- h. Special lung and heart examination.
- i. Fluoroscopic and radiographic examinations of chest.

During the present year the work of the medical division has been greatly increased, and a large number of medical examinations are made in the office. Advice is also given by the physicians of the board to all workers who come for examination. The offices of the board have been greatly extended, a complete set of modern diagnostic instruments has been installed, and thorough examinations are made by the physicians of the board, including special fluoroscopic and radiographic examinations. The board also employs a dentist, an oculist, and a lung specialist for special examinations in these branches. During the summer of 1914 the United States Public Health Service conducted over 3,000 physical examinations in conjunction with the medical division of the board.

2. Work done:

	1912	1913	1914	1915
Persons examined.....	800	1,234	4,547	4,196 <sup>1</sup>
Persons found suffering from tuberculosis .....	13	71	93	43
Sick benefit members of Local 35 examined .....	....	....	326	647
Tuberculosis members of Locals 35, 9, and 23 examined and supervised .....	....	....	....	22

E. FIRST AID AND NURSING SERVICE DIVISION

During 1915 the Industrial Board of the State Labor Department established a rule that "in every factory employing more than ten persons in which power-driven machinery is used for manufacturing, there shall be provided a first aid kit at all times free of expense to employees," and each factory should also employ a physician or nurse to instruct workers in the use of the first aid equipment. In order to enable the manufacturers under the jurisdiction of the board to comply with these rules and regulations of the Industrial Board, a first aid box specially adapted for the needle trades has been devised, and 500 of these boxes were manufactured, filled, and sold at cost price to the manufacturers in the industries.

The Dress and Waist Manufacturers' Association has also consented to pay for the service of a trained nurse, who is appointed by the board and supervised by the Nurses' Settlement, of 265 Henry street. The nurse makes monthly visits to the shops, instructs responsible employees in the use of the first aid box and its contents, makes a general inspection of the health conditions of the female workers, and gives from time to time such advice to them as is necessary.

A number of changes have recently taken place in the administrative staffs of the various Illinois state hospitals. The changes began when Dr. P. M. Kelly, superintendent of the Kankakee hospital, resigned on account of ill health. To fill this vacancy, Dr. R. A. Goodner, superintendent of the hospital at Anna, was transferred to Kankakee. Dr. G. W. Morrow, assistant superintendent of the Anna hospital, was also transferred to the Kankakee institution, and Dr. Eugene Cohn, assistant superintendent at Kankakee, was made assistant superintendent of the Chicago hospital. Other transfers have been made as follows: Dr. S. W. McKilvey, assistant physician at Anna, to the same position at Kankakee; Dr. H. J. Smith, assistant superintendent of the Chicago hospital, to the Anna hospital as assistant superintendent; Dr. J. A. Campbell, from the superintendency of the Watertown hospital to the superintendency of the Anna hospital; Dr. Charles F. Read, assistant superintendent of the Chester hospital, to the Watertown hospital as superintendent; Dr. Isaac Fremmel, assistant superintendent of the Chester hospital, to the Lincoln School and Colony as assistant superintendent; Dr. C. V. Caldwell, assistant superintendent of the Lincoln institution, to the Peoria hospital as assistant superintendent.

St. Margaret's Hospital, Montgomery, Ala., is making extensive improvements, including the erection of a new pavilion for negro patients.

<sup>1</sup>To October 26, 1915.



## WELFARE AND EFFICIENCY ACHIEVED AT THE SAME TIME

**The United Shoe Machinery Company Applies the Same Business Principles to Its Employees That It Applies to Its General Business—Protection, Comfort, and Convenience the Chief Objects—The Result Is General Welfare and Human Efficiency**

By WILLIAM H. WALSH

IN a journey from Boston twenty miles north to the city of Beverly, Mass., one will see from the train windows to the left the tall chimneys and buildings of the United Shoe Machinery Company's plant, which covers an area of 300 acres. This may give some idea of the probable number of workshops that make up the plant, but will not give a proper conception of the business itself, nor of the physical and moral welfare of the 4,600 persons employed.

In order to obtain a clear realization of the company's attitude toward welfare conditions, it will be necessary to pay a visit to the shops, get a mental picture of the immense factory, inside as well as out, talk with the employers and employees, and see how well the buildings are lighted, how they are kept clean, safe, and sanitary, and judge the measure of welfare and efficiency that the United Shoe Machinery Company considers essential to the maintenance of good physical, mental, and moral condition on the part of its workmen.

Recognizing that good health is one of the prime essentials to good work, that it is the easiest thing to lose and the hardest to regain, the aim is to neglect nothing that will contribute to that condition. This proposition is not in any sense a charity, nor is it purely philanthropic. Good health is not something that can be bought at the drug store, and, moreover, it is the first requisite of the efficient worker. These facts are self-evident, and for that reason the company was quick to realize their practical value. Its first aim was to provide plenty of sunlight and an abundance of fresh air, both of which have been obtained. The sixteen buildings, constructed of reinforced concrete, have 75 percent of wall space devoted to windows, through every inch of which the sunlight enters, and, in addition, for the sun does not always see fit to shine, the whole plant is flooded with electricity. Not only are the lamps placed so that they radiate light generally, but individual lamps are provided, with protecting eye-shades, on every machine, ready for use at all times. Moreover, the atmosphere is kept scrupulously clean, and by the use of powerful suction fans every particle of dust is drawn upward and away from the operators' lungs.

As the visitor goes through the various rooms

during the busy workaday hours he cannot fail to be impressed by the various devices that are seen for eliminating dirt. For example, seeing the immense lathes, bed planes, screw machines, etc., with all their iron and steel shavings and dust, and oil automatically supplied in streams, the wonder grows how it is possible to eliminate the floating and flying grime; yet the floors are as clean as those of the average public hall or school room. The work benches are clear of every speck of dirt or scrap of metal, except the metal which is being fashioned and the tools absolutely necessary. The secret of all this cleanliness is obvious, for at intervals along the various floors are to be seen men with brooms and baskets sweeping up the waste, dust and dirt almost as soon as it falls. In addition, there is provided an exhaust system in connection with all the polishing and grinding machines, by which means every particle of dust or flying scrap is sucked into large pipes and then shot down—or, more properly, blown down—to the separator, to be later carried to and burned under the boilers. The scrap which is thus collected is, therefore, reclaimed and serves as fuel, thereby furnishing a concrete example of that efficiency which is everywhere apparent.

Coming to the screw machinery room, which undoubtedly affords the maximum opportunity for dirt on account of the great quantity of oil that is constantly applied to the steel cutting process, the floors and all the surroundings are found to be scrupulously clean—in fact, correspond in that respect with the rest of the factory. Here, as in other parts of the establishment, wherever the oil escaping the guards drips on the floor it is washed off with a preparation of soda water, which is constantly supplied from a huge vat in the center of the room.

Nor is this all, for, in addition to the constant washing and sweeping, there is also a new sanitary device for caring for the refuse of the factory. This consists of small trucks of galvanized iron, with two compartments approximately 14 inches square and 26 inches deep. One compartment is filled with clean sawdust, while the other contains a supply of empty paper bags, with twine cut the proper length for tying up the bags after they are filled with the sawdust removed from the

cuspidors. In operating the device, the porter picks up the galvanized iron cuspidor, scrapes out the refuse sawdust with an iron scraper into a funnel made of the same material as the cuspidor and directs it into the empty bag, after which he

The United Shoe Machinery Company has provided a water supply system that is the acme of perfection—the last word in shop systems. It consists of an engine, a dynamo, a pump, a refrigerator tank, and a Loomis filter. The pump drives the water into the filter, where pulverized charcoal and ground quartz purify it. Then it drives the water into the refrigerator tank, where it is chilled to a delicately cool temperature and ready for distribution through pipes to the fountains throughout the shops.

Of equal, if not paramount, importance to the drinking system are the systems of light and air, heating and ventilation. So perfect are the arrangements for all this at Beverly, and so necessary do the officials of the United Shoe Machinery Company consider the physical health of their employees as the first requisite of their efficiency, that nothing has been neglected to bring those systems up to the most exact modern re-

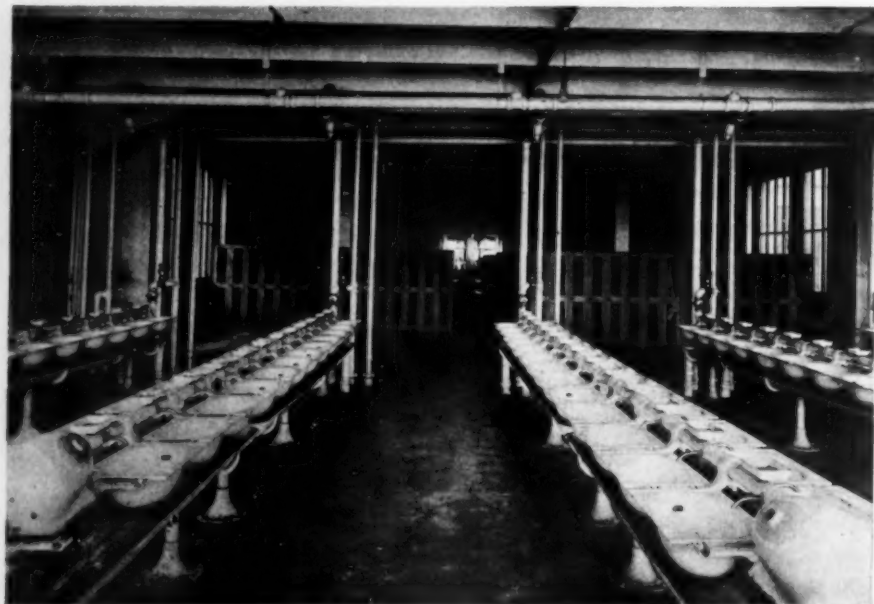


Fig. 1. United Shoe Machinery Company, Beverly. Wash room, with sanitary basins, automatically filled and emptied.

takes a scoopful of the clean sawdust and fills the cuspidor anew. When the bags are filled, they are taken to the boiler room and burned. There are cuspidors on the floors of all the rooms, at irregular intervals, for the use of all employees. All day long the porters are kept busy with their trucks, brooms, and mops gathering the refuse, so that not a particle of it remains on the floors.

The next step in the sanitary arrangements noticed on a tour of the great plant was the system of filtering, cooling, and distribution of drinking water in the work rooms. Just here the improvement is so remarkable as to be in the nature of a revelation. The man with a long memory will say that during his earlier years the drinking water in the average factory was kept in a bucket, and machinists and shoemakers, in common with the ordinary workman, drank out of a tin dipper. Now all this is changed. The tin dipper has given place to a bubbling fountain, where each man may drink at his pleasure, assured that he is partaking of water filtered and cooled in the purest manner.

requirement. Evidently believing implicitly in the divine command, "Let there be light," the sixteen buildings, constructed of reinforced concrete, have, as stated above, 75 percent of wall space for



Fig. 2. United Shoe Machinery Company, Beverly. Treatment room in the emergency hospital.

windows, and individual lamps, with protecting eye-shades, are provided for every machine. So, too, in the matter of ventilation the provision made has been adequate. In each of the wings A, B, C, and D are air shafts running from roof to



basement, through which cool, fresh air is drawn. In cold weather the air passes into an inclosure containing steam-heated coils and is made warm, and an adjacent fan draws this hot air from around the heated coils and discharges it throughout the building. At each air shaft is an opening of 9 square feet, providing for the expulsion of foul air, and there are four such openings on each floor.

The system of ventilation applies to the toilet rooms, wash rooms, lockers, and shower baths. The wash rooms contain individual basins, which are automatically filled and emptied, tempered water being used; while the toilets and urinals of the most modern type are installed in light, airy rooms, kept scrupulously clean. The same modern methods of cleanliness and sanitation pervade the shower baths and baths for female employees,

airy room, amply lighted and well equipped with all the hospital essentials, including even a lung-motor and an x-ray machine, ready for use. A doctor is in attendance, who is always present during working hours, ready to attend to accidents at a moment's notice. Fully nine-tenths of the accidents at the factory are of a trivial description. As showing the extraordinary care which the company takes to guard against accidents, the incident was cited where, after the state inspectors had approved the safety devices employed, the management appointed a special committee, consisting of a representative from each department of the factory, which made further recommendations. It was found that within a year from then the number of accidents, in proportion to the number of employees, had been reduced more than 73 percent. Such a condition

makes one think of the difference, amounting to a positive revolution, between the old-time machine shop, with all its possibilities for accidents, and the materialization of modern thought in factory equipment. Surgery has indeed come to be the handmaid of mechanics, the former including in its operation all the appliances to meet every emergency.

There is one department which gives even greater occasion for the making and distribution of dirt, dust, and cinders than the screw machine room—the blacksmith shop; but the same system is employed here as



Fig. 3. United Shoe Machinery Company, Beverly. Club house of the United Shoe Machinery Company's Athletic Association.

which are provided with all the accessories of a first-class hotel. Here, as throughout the factory, the air is perfectly fresh and free from odors, dust, gases, and impurities, while all the foul air is expelled as scientifically as it is possible for human ingenuity to devise.

Of course in a plant as large as that of the United Shoe Machinery Company, employing close to 5,000 men, the liability of accidents is necessarily large, but, according to statistics at the factory, it was found to be surprisingly small. So many protective and safety devices have been installed that the number of really serious accidents has been reduced to a minimum. Nevertheless, when an accident occurs, though it be only the getting of a particle of dust in the eye of a workman, he is compelled by the rules to report at once to the emergency hospital in the factory. This emergency hospital is a large, clean, and

in the other departments—that is to say, the exhaust plan, by which the suction fans carry off all particles of dust as soon as created.

So it is in the drop forging department, where all the forging is done, and where forged articles are made from a size as small as the end of a lead pencil to those of large dimensions. Here, too, the same minute attention to the details of cleanliness is given as in all the other departments, and the same system is in vogue. It is the same in the foundry and in the boiler room; and, in fact, in all the rooms of the gigantic plant everywhere the atmosphere of cleanliness, of efficiency, and the elimination of dirt, the preservation of the health and welfare of the employees is apparent.

When the men come pouring out through the great center doors at noon and wend their way to their homes, they are as cleanly and tidy, and

about as well dressed, as the average clerk or business man. It is plain, too, that they take time to wash up, for their faces and hands bear unmistakable evidence of the fact. Quite a number of the men remain to lunch in the factory, some partaking of it in the lunch room provided in the building, where they can eat a hot lunch at little more than cost, while others sit around on the work benches and eat the lunch they bring with them. The majority of the workers, when they wash up at quitting time, change their overalls for their street clothes, leaving their discards in their lockers, and go forth looking neat and clean.

The toilets, lockers, and wash rooms are convenient to the men on entering and leaving the factory, are all sanitarily equipped, contain individual sanitary basins, are automatically filled and emptied, and in every way thoroughly up to date. Moreover, it is arranged that there shall be individual lockers for every one of the thousands of employees.

In caring for the welfare of the men, the most painstaking efforts have been made for safeguarding the lives of all, and the safety devices installed are not only the most modern, but also the best that could be devised. Geers, shafts, pulleys, and belts are all carefully guarded, so as to prevent the possibility of injury to the worker, and the greatest attention has been given to this problem in all its phases. Ample protection from fire is assured, for there is a fully equipped fire department always ready for an emergency.

Once outside the factory, it is apparent to the ordinary observer how much attention is given this question of welfare work, for he sees on all sides in the gently sloping, well-kept lawns, with flowering plants and beautiful flowers, the same idea of efficiency and service that marks the factory inside.

Let the visitor go a step farther and inspect the Country Club House belonging to the employees of the company. He will be astonished at the beauty of the location, the apparent luxury and expansiveness of the surroundings, and the architectural gem of the club house itself. Standing on the front veranda, one may look at the broad expanse of athletic grounds, acres on acres of fields, where baseball, football, cricket, field sports, track sports, and everything else in the way of athletics are indulged. At the side of the house are the tennis courts, while around the corner are the golf links, stretching as far as the eye can see. The cost of the club house was something over \$35,000. It was given to the employees of the company on December 30, 1910, and is managed by the United Shoe Machinery Athletic Association. Inside the club house are bowl-

ing alleys, billiard and pool tables, a large reading room, furnished with lounging chairs and tables, and supplied with the latest magazines and periodicals; also a dining room, a dance hall, and a perfectly appointed theater, with all the accessories. It is quite natural to ask what is the cost for membership, and one will be surprised when told that for all the privileges of the club the fee is but \$1 a year. Another thing—it will not be necessary to inquire what is the great day at the club grounds, as someone is sure to mention that day. It is "Sam Sam," the great annual day of days, when all roads around New England lead to Beverly and to the grounds of the Country Club, when the Sam Sam celebration is apt to be honored by a visit from the governor of the commonwealth and scores of other less notable state or city officials; but the best description of it falls short of realization.

If, in conclusion, any words of philosophy were permissible as explaining further the principles of welfare which characterize the vast industrial plant at Beverly, it would be well to quote from Aristotle that its plain object and ideal is "to work for worthy ends," with a view to the happiness, the contentment, and the mental, moral, and physical efficiency of all concerned.

#### EXAMINE PEDDLERS FOR DISEASE

##### New York Health Department Plans More Convenient Methods For This Important Work

The occupational clinic of the Division of Industrial Hygiene of the Bureau of Preventable Diseases has recently established an auxiliary clinic at a store situated at 49 Lafayette street, Manhattan, and another at 381 Fulton street, Brooklyn, where peddlers applying for licenses are submitted to a medical inspection very similar to that which obtains at the Federal quarantine station. In this way the work of the division has been made a part of the office of the Bureau of Licenses, doing away with a considerable amount of hardship for the thousands of peddlers of all descriptions who apply for licenses, and effecting a great economy both in time and energy. Within the past six weeks nearly 19,000 individuals have been passed on in this way. At the same time special examinations of industrial groups and food handlers can be carried on at the occupational clinic without the confusion and interruptions that were inevitable when large numbers of peddlers invaded the clinic.

The physicians assigned to work in these new offices established by the Bureau of Licenses select those individuals who present any indication of marked malnutrition, skin eruption, or other condition which may excite suspicion as to the presence of tuberculosis, syphilis, other infections or venereal disease, and refer them to the occupational clinic, where they are submitted to a thorough physical examination, and where proper laboratory tests can be made if necessary.

The Rolston Hospital, El Paso, Tex., is occupying a new building erected and equipped at a cost of over \$100,000.



**LOOKING BEYOND THE DOOR OF WELFARE SERVICE IN THE DEPARTMENT STORE****How B. Altman & Co. Meet a Situation Arising in a City of New York's Complex Environment—Some Results of the Campaign of Education on the Part of Its Medical Department—Recreation and Luncheon Features—School and Vocational Classes**

By ANNE KENDRICK WALKER

TO the student of the welfare movement the conditions out of which it grew and the conditions making for its fuller development are deeply significant of the entire industrial organization, and nowhere, perhaps, are the conditions more interesting than in a city of New York's complex environment. Any single effort, therefore, to meet a situation in a city where the flames of industrial unrest are being continually fanned by unseen currents is an expression of an age fully alive to its responsibilities and keenly alert to a movement which seeks a proper economic adjustment of industrial relations.

Has anyone the idea, however, that welfare work is like a huge cornucopia, scattering gifts, and the hungry and the thirsty and the hard-working being suddenly filled? Or does welfare service appear as an investment on which satisfactory returns are expected by corporations or other business organizations? Or has welfare work been established on a routine so broadly educative that we are now able to see beyond the door and no longer question?

The time has come when we want to get away from any false reasoning. If too much stress has been placed on the benefits derived by the employees, while all the expense is borne by the employer, we should make it clear that welfare service is nothing if not benevolent; and if too much has been said of the returns that the investment yields to the employer, we should try to make it equally clear that welfare work is ineffectual unless it does yield returns on the investment.

Which are the greater, the benefits or the returns? Who shall decide? Not the employer. The world is too quick in misjudging, too eager in arriving at conclusions before hearing the important witnesses; and, besides, the question has already been answered and answered infallibly. We can read the answer in the eyes of the anemic girl in business; we can hear it in the step of the young boy, with holes in his shoes, and who is the sole breadwinner of his family; we can hear it echo in the tubercular cough of the frail young creature who is sent away to the country for a rest.

In presenting some phases of welfare work of B. Altman & Co. for their several thousand em-

ployees, why should these alone answer the question? Are not these isolated cases? you ask. Well, what of the young woman who goes up to the emergency hospital established by this company and complains of a sore throat? The house physician sees diphtheritic symptoms and orders immediate isolation. What of the girl, standing for hours behind the counter, unconscious of the insidious disease that has laid its hand on her? What of the hundreds on the anemic list? What of those suffering with neuritis? What of those with fallen arches and unable to obtain proper braces? What of those with weak eyes? None of these cases is isolated. They were selected at random from the files of the medical department, which has always been a part of the welfare work of B. Altman & Co., and which treats between 400 and 500 employees weekly, the record for the year ending December 31, 1915, containing over 18,000 cases.

But the emergency hospital and the medical assistance given employees are only a part of the Altman welfare work, of which not a single feature is isolated, but coordinate with all. Every department is adequately equipped, scientifically managed. The luncheon arrangements, the recreation rooms, the library, the school, the vocational classes—step by step has the work progressed from that early and modest beginning in the old Eighteenth street store, where Benjamin Altman laid the foundation. If an idea was worth the nurturing, Mr. Altman saw that the roots were dug around—that it did not die from neglect. His plans were far-reaching—the highly developed efficiency of the present welfare work is the result of those earlier ideals to a large extent, but the general scope of the present activities is due to the well-wrought purposes of the present administration.

Mr. Michael Friedsam, the head of the house, is a welfare enthusiast. He has made it possible for welfare work to reach thousands with its reassuring and cheering message. His mental grasp of the work has made for its broadly scientific development, has lifted it to a dignity as part and parcel of a great business organization—with departments working in harmony, in charge of welfare experts.

Take the methods and equipment of the medi-

cal department. A physician is on active duty a part of each day and two graduate nurses of wide hospital experience are on duty all day. A history is kept of every case, is filed alphabetically with the card index system, and all subsequent

even the prevention and arrest of communicable diseases, but what interests me intensely is the number of young people who, through the assistance of the medical department, are able to keep on with their work. Hundreds, on the verge of a breakdown, haunted by the fear of long illness, of having to give up altogether, have been built up, put on a proper diet, and escaped serious breakdowns. Where employees are underweight, anemic, milk is supplied free. Any medicine prescribed is also supplied free. No tax of any kind is ever imposed. Cases like these, together with the campaign of education which so directly affects the public health, interests constantly and gives a peculiarly vital significance to the daily routine."

Passing on to the rest and recreation features and to the educational departments, some idea of the scope of the work may be gained by the number of floors

treatments are entered on the back of the card. No case is too trivial to be treated. Cases are followed carefully and urged to return for observation. The campaign of education is no small part of the work. One of the results is shown in the fact that when the hospital was first opened, the number of infected fingers from the prick of pin tickets was very large. The records now contain only rare cases of infection from neglect. In point of equipment the emergency hospital has two wards, with a total of 7 beds. There is a consulting room and a surgery, which is equipped down to the smallest detail.

"But the human side of welfare work," some one said to the house physician. "I want to know something of the human side."

"The 'human side?'" he repeated. "Why, there isn't a day that does not teem with the 'human side.'"

"But your own experiences? What is the most interesting phase of welfare work in a large department store?"

"What is most interesting to me is not always the treatment of the ordinary illnesses of life, or

devoted exclusively to the use of the employees. The store occupies an entire city block, and three floors, with their immense area, are utilized in the welfare plan. On the eleventh floor are spacious and separate rest rooms for men and women.

Comfortable chairs, couches, writing tables, floods of sunshine, charming views over the roofs of New York, a quiet spot in which to sew, read, or chat, write letters—this is the atmosphere of the recreation rooms.



Fig. 1. B. Altman & Co., New York. First aid room.



Fig. 2. B. Altman & Co., New York. Ward in the emergency hospital.



On this floor also are the class rooms for the younger employees who have entered business before graduating from the grammar and parochial schools. The school is affiliated with the public school system. Here also is the library,

couches; and here the young girl, the older woman, come during the busy day, where, undisturbed by even a whisper, tired nerves relax and courage comes back for the duties, not alone of the routine of business, but the larger duties that

require courage when the day is done. Beyond the silence room is a large sun parlor, opening on an open-air promenade, a portion of which is reserved for a smoking room for men employees.

With each step having been made with the view of meeting the exigencies of an extensive plan of welfare service, a pertinent question may come from certain quarters. There may be some who wish to know if the employees "support" the plan with enthusiasm, or only half-heartedly. The statistician can answer in some degree.

We have already seen that over 18,000 cases were treated the past year in the medical de-

partment of this company. Twenty-five hundred employees are served with luncheon daily. Over 2,000 girls and women use the recreation rooms daily; an approximate number of boys and men

avail themselves of the rest and recreation priv-

which is open at regular hours every day, and here are the vocational training classes, where instruction is given in various subjects that make for efficiency.

The luncheon arrangements on the twelfth floor are ideal. As essentials, there are sunlight and air on all sides. The floor is tiled. The tables are covered with white glass. In the center of the restaurant are two large steam tables, from which are served hot, palatable, and nutritious luncheons. The menu is changed daily, but the prices, which are nominal, remain the same. The spacious kitchen is a marvel of scrupulous care. The floor is bright with red Dutch tiles, and there is a wainscoting of shining white tiles, with painted walls above. The cooking utensils are of aluminum. There are exhaust fans for withdrawing vitiated air. Refrigeration, filtration of water, fountains well distributed, an incinerator, are among the important features of interest in safeguarding the health of employees.

On the thirteenth floor is a great "silence room," furnished with many chairs, inviting, with

ileges; 500 employees are members of the library; 75 of the younger employees attend school; the vocational classes are overflowing.

"How do you like the school?" was asked one



Fig. 3. B. Altman & Co., New York. Rest room for women.



Fig. 4. B. Altman & Co., New York. Kitchen. Floor laid with red Dutch tiles, wainscoting in white tiles, with painted walls above.

of the boys, who had made a particularly bright record.

"Great!" he answered, his eager eyes glowing with enthusiasm. "Great! I only wish it lasted all day!"

In an article of this character it is only outward manifestations of welfare work that can be presented. There is, however, a far more intimate side that few are privileged to touch on. This intimate side is known only to the welfare director and to those who direct her administrative offices. The work of the welfare director,

who has been in charge of the work since its early days, touches most closely the lives of hundreds and hundreds of young women who come to her for counsel. This side need not be discussed here, but it goes beyond even food, medicine, rest—the something that not only sustains life, but puts into that life the thing that makes for self-respect, for independence, for happiness.

These are some of the ideals on which the Altman welfare work is based—ideals which foster mutual relationships and which help to higher levels of usefulness.

### WELFARE WORK IN A BOOKBINDING ESTABLISHMENT

#### How the J. F. Tapley Company Improved the Working Conditions of Its Employees— A Contrast Between Present and Past Methods

PRIOR to 1912 any kind of welfare work in a bookbindery, particularly in New York city, was unknown. Employees were forced to work under whatever conditions were found in the various plants, without regard to fresh air, sanitation, and health and accident requirements, which the factory inspectors were somewhat lax in enforcing.

With the inauguration and immediate success

books, removed their plant from 33 Bleecker street to 531-535 West Thirty-seventh street in 1905, leaving a then antiquated building for a modern steel and cement structure, with every known facility for clean, hygienic, and modern plant operation. In accordance with the factory laws at that time, a room was prepared having a window opening to the outer air and not on an airshaft, with a couch and easy chairs, for cases of slight illness of male or female employees, which numbered 250. This equipment was sufficient for a number of years, but, with the increase of the organization to 350 employees, about 60 percent of which were women and girls, the need of greater space for cases of sudden illness or accident and a desire to be of more personal service to the employees resulted in the setting aside in the latter part of 1911 of a larger room, with three outer windows, and fitted with an equipment of cot, cabinet, and emergency table, chairs, screen, etc.

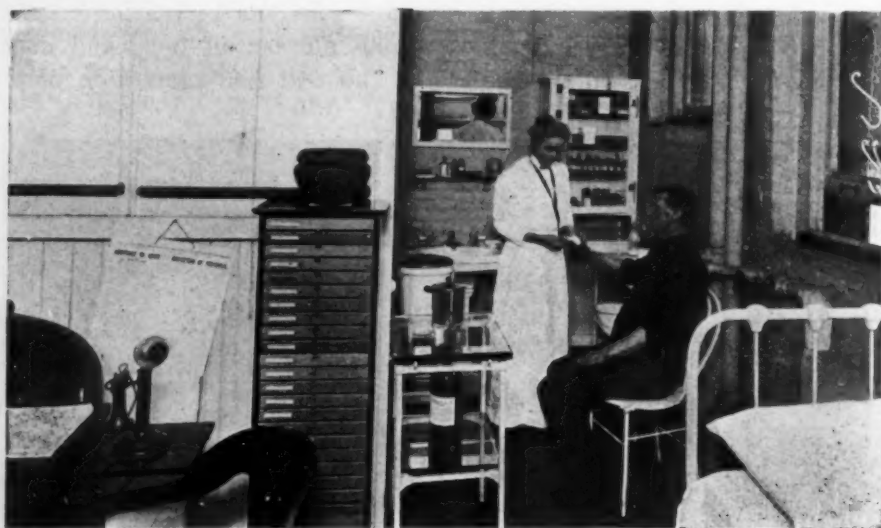


Fig. 1. J. F. Tapley Company, New York. Emergency room.

of welfare work in some of the department stores, factories, and large office organizations employing female help, a general activity became apparent throughout the establishments of the better organized and more considerate manufacturers after a careful observance of the state factory laws and an investigation of the good results accruing to both the employer and employee from the installation of a properly organized welfare department.

The J. F. Tapley Company, manufacturers of

A short time after this larger room had been prepared, it was decided to create a closer bond of unity between the employer and employees by installing a registered trained nurse, who had been engaged in welfare work in one of the large department stores. The work of the nurse developed rapidly until, in addition to attending to the usual cases of illness, minor injuries, accidents, etc., it included the calling on sick employees at their homes, the administration of simple remedies, talks on hygienic living and dressing, and established practically a personal



contact with each female employee which was not possible previously. Dry clothing was provided for the girls in case of inclement weather when arriving in the morning, and thus have dry clothing in which to work during the day.

A vacation savings fund was started, which enabled employees, particularly the less experienced girls working for a minimum wage, to save sufficient during the year to permit a short annual vacation. A branch of the New York Public Library was installed for the convenience of all employees, and the number of books used weekly was most encouraging. A special library of technical books on trade topics was collected, which gave the men, particularly the younger and less experienced ones, an opportunity to improve their positions.

Instead of sending all first aid cases to the hospital, it was possible through the services of the trained nurse to treat all minor accidents in the emergency room, and, by encouraging the employees to consult the nurse in cases of slight illnesses, the general health of the entire organization was improved.

The welfare department also tabulated and kept certain records on the employees, covering past experience, period of service, promptness, and health, and made general recommendations for advancement in meritorious cases. In short, this department attended to matters pertaining to the relation of the employer to the employee where an intimate knowledge of the condition and disposition of the employee was advisable. Under this arrangement the cost, including interest on the investment, depreciation of the equipment, salary of the nurse, and the expenditure for medical and other supplies, averaged for 400 employees approximately \$5.20 a year per employee.

#### American Association of Industrial Physicians and Surgeons

On Monday, June 12, at Detroit, Mich., there was organized a new medical association known as the American Association of Industrial Physicians and Surgeons. This organization was the result of the preliminary work during the year of ten or twelve industrial surgeons scattered throughout the country who have felt for some time the need of an association of men doing this special kind of work. The preliminary meetings were held in Chicago, and a charter was secured last spring under the laws of Illinois.

The first annual meeting was held at the Hotel Cadillac, in Detroit, on June 12, and almost 200 members were present, there being 250 charter members on the membership list. This membership list is growing, and by the time of the next annual meeting there is expected to be a membership of at least 500 or 600.

The objects of this association are to foster the study and discussion of the problems peculiar to the practice of

industrial medicine and surgery, to develop methods adapted to the conservation of health among workmen in the industries, to promote a more general understanding of the purposes and results of the medical care of employees, and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession.

The conservation of life by the prevention of disease and accidents among employees is the keynote to all industrial medical and surgical work. New problems are constantly arising in the experience of every physician engaged in this work, and this association will offer the means of meeting and deciding these problems by standardizing the methods used, so that the work will result in the greatest good to the employees, the employers, and to humanity in general.

Some of the problems that are up for immediate discussion and decision are:

1. Medical examination of employees; the results and the exact benefits of this procedure.
2. Preventive surgery, and the surgeon as an aid in preventing accidents.
3. Emergency surgery and standardizing the proper treatment in certain types of emergency cases.
4. Standardizing the records used in this work.
5. Various forms of industrial insurance and the need of a federal health insurance law.

Officers elected for this association are: president, Dr. J. W. Schereschewsky, United States Public Health Service; first vice-president, Dr. Robert T. Legge, Berkeley, Cal.; second vice-president, Dr. Francis D. Patterson, Philadelphia; secretary-treasurer, Dr. Harry E. Mock, Chicago.

The board of directors consists of Dr. T. R. Crowder, Pullman Company, Chicago; Dr. R. W. Corwin, Colorado Fuel and Iron Company, Pueblo, Colo.; Dr. Harold M. Clarke, Crane Company, Bridgeport, Conn.; Dr. W. Irving Clark, Norton Grinding Works, Worcester, Mass.; Dr. A. M. Harvey, Crane Company, Chicago; Dr. C. E. Ford, New York; Dr. Otto Geier, Cincinnati Milling Machine, Cincinnati; Dr. H. L. Cameron, Republic Rubber Company, Youngstown, Ohio; Dr. C. J. Farnum, Avery Company, Peoria, Ill.; Dr. G. L. Howe, Eastman Kodak Company, Rochester, N. Y.; Dr. F. C. Warnshuis, Pere Marquette Railroad, Grand Rapids, Mich.; Dr. J. E. Mead, Ford Motor Company, Detroit, Mich.

The next annual meeting will be held in New York on the Monday preceding the opening of the convention of the American Medical Association.

The following is the program of the meeting:

#### MORNING SESSION

Dr. A. M. Harvey, chief surgeon National Malleable Castings Company, acted as temporary chairman, and Dr. Harry E. Mock, chief surgeon Sears, Roebuck & Co., acted as temporary secretary.

10:00 a. m. Organization meeting—Report of organization committee, reading of constitution, general discussion of plans, appointment of committees, election of officers.

11:30 a. m. "The Scope of Medical and Surgical Supervision," Dr. C. G. Farnum, chief surgeon The Avery Company. Discussion—Opened by Dr. Francis D. Patterson, chief Division of Industrial Hygiene and Engineering, Department of Labor and Industry, Pennsylvania.

12:30 p. m. Luncheon at the Cadillac Hotel.

#### AFTERNOON SESSION

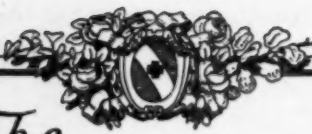
2:00 p. m. "The Educational Function of Industrial Physicians," Dr. J. W. Schereschewsky. Discussion—Opened by Dr. Wilber E. Post, chief medical director People's Gas Light and Coke Company.

3:00 p. m. "The Factory Doctor," Dr. S. S. Marquis, physician Ford Motor Company. Discussion—Opened by Dr. R. L. Cameron, chief surgeon Republic Rubber Company.

4:00 p. m. "Health Insurance and the Prevention of Sickness," John B. Andrews, Ph. D., secretary American Association for Labor Legislation. Discussion—Opened by Dr. C. D. Selby, Commissioner of Health, Toledo, Ohio.

#### EVENING SESSION

7:00 p. m. Banquet at Cadillac Hotel. Toastmaster, Dr. Sidney M. McCurdy, chief surgeon Youngstown Sheet and Tube Company. There were no set speeches, but a number of short talks by Dr. Joseph C. Bloodgood, Baltimore; Dr. W. A. Evans, Chicago; Dr. John Dodson, dean Rush Medical College; Dr. W. T. Brown, Valmora, New Mexico, and others.



*The*  
**MODERN HOSPITAL**

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Contributors, subscribers, and readers will find important information on advertising page 34.

### The Conservation of the Health of Industrial Workers

Who is responsible for the health of the worker in industry—the state, the employer, or the employee? To this question various answers have been given. The collectivist, believing in social responsibility, argues for paternalistic control; the individualist, on the other hand, true to his principles, pleads for a minimum of governmental or other interference. Through the clouds of discussion there may be discerned a general approval of efforts to enhance the worker's efficiency, while in actual practice there is a steady drift toward industrial organization for the promotion of health.

By common consent there are certain evils which the people, speaking through government, stand ready to forbid. Thus the sanitary code of the city of New York declares it to be the duty of employers to provide means to prevent occupational diseases. By incorporating this demand in the sanitary code, the New York City Board of Health gave legal expression to the undoubted wish of all right-minded citizens. Specifically, the sanitary code declares that "every employer shall provide reasonably effective devices, means, and methods to prevent the contraction by his employees of any illness or disease incident to the

work or process in which such employees are engaged."

To laws and ordinances of this character must be credited much, but by no means all, of the notable improvement in workshop sanitation which has been effected in the United States during the past decade. Yet such laws are not always of great value. The enactment of laws of this kind in response to an insistent public demand is one thing; their enactment at the behest of an inspired reformer, and in the absence of widespread interest in the object at which they are aimed, is quite another; and it is far from surprising that, in certain localities, preventive regulations designed to control grave occupational hazards are more honored in the breach than in the observance. On the other hand, we can, happily, point to many employers who, not waiting for legal compulsion, have diligently sought for their employees the highest measure of safety.

It will be conceded by everybody that definite noxious influences must not be allowed to play havoc with the health of workers. Indifference to such influences cannot be tolerated, nor deliberate neglect condoned; the dollar must not be placed above the man. For each industry there should be an appropriate sanitary regimen, and no business must be conducted in a manner which is unmistakably prejudicial to health. It is from this point of departure that industrial welfare work commonly proceeds. On entering the wide field of industrial social service, programs begin to differ and paths to diverge. Here, both in theory and in practice, socialistic and individualistic tendencies manifest themselves. Not the least pronounced among the individualists is the worker who resents all offers of aid, however well intentioned.

It is difficult to quarrel with the manly spirit of the worker who protests against inquiries into the state of his health, and who, especially, repels all attempts to investigate the life he leads outside of the factory. He contends for what he regards as an inalienable right—the right to do himself an injury if he so chooses. Employers who seek to improve the welfare of their employees must reckon with the opposition of stiff-necked men of this stamp. To overcome it, they must be absolutely sincere in their purpose to render service; moreover, they must "make good," for in the last analysis they will be judged by what they succeed in doing, and not by what they attempt to do. Cooperation, frankly offered, is probably the best means of combating the opposition of the extreme individualist. Let the workers themselves participate in formulating the welfare program and



in controlling the machinery of its administration, and a large part of their opposition will be dissipated.

It is impossible, within the scope of this article, to discuss the merits of the numerous industrial welfare programs which are now being tried out; one can refer only to the general aims of the movement. While the greatest stress is commonly put on the promotion of physical efficiency, this is sought by humanitarians, not as an end in itself, but because through the conservation of health the life of the individual acquires a richer and more valuable content. From quite another angle the welfare movement is ardently supported by the advocates of national preparedness, who perceive that, through the conservation of individual strength and power, the nation will be enabled to assert itself and to act effectually in time of need, and, finally, the industrial health movement has a friend in the enlightened seeker after profits.

It is not necessary to inquire too closely whether industrial welfare work is motivated by a desire for profit, by an ideal of national efficiency, or simply by human sympathy. Its goal is the health of the worker, and its byproducts include a certain measure of human happiness, as well as increased earnings, and an enhancement of national power. It is a happy moment in the life of the nation which finds so many forces combined in a movement of such paramount value.

Of one thing I am convinced—namely, that any health movement will be abortive which limits itself to the consideration of but a single phase of the life of the individual. Health hazards are to be found in the home as well as in the shop. Health may be injured by contaminated food, or by lack of food, as well as by foul air; by immoderate drinking as well as by fatigue; by crowded cars as well as by crowded and ill-ventilated shops. The health program must, therefore, be comprehensive.

It is essential, also, to understand that health cannot be given, but must be taken—that it must be sought, won, and preserved through intelligent self-help. It is the duty of public officials and of employers to establish and maintain wholesome environmental conditions. On the worker devolves the duty of profiting by the opportunity which is given to him. He can be stimulated and guided, of course, and more and more does he receive the necessary prompting. It is significant that a constantly increasing proportion of the activities of health departments are devoted to education in personal hygiene.

Preventive medicine will be more and more suc-

cessful, but it will never wholly succeed; its ideal is unattainable. When all known preventive measures shall have been taken, disease will remain. One of the most difficult tasks of the social worker is to bring medical science and art into satisfactory relationship with disease. Given a concrete case of illness in a person possessing slender material resources, and lacking intelligence to seek really competent diagnosis and treatment, can such an illness be handled in a manner of which we need not be ashamed? Are the chances in favor of or against effective treatment? By this test the medical part of industrial welfare work must be judged. If it does not meet the test today, it is partly because our passion for service has not been sufficiently aroused! Are we sincerely endeavoring to give to the industrial worker the full medical benefits which we covet for ourselves?

In so far as our failure is a moral failure, it may be corrected by the will. But there will remain the task of perfecting medical administration, and to this complex but fascinating task THE MODERN HOSPITAL and its coworkers must address themselves in the months and years that are immediately before us. S. S. GOLDWATER.

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### The Visiting Nurse in Industry

The first industrial visiting nurse in the United States was engaged in 1897 by a New York department store to watch its girls' rest rooms and to visit sick employees in their homes. For a long time the average industrial nurse was a middle-aged, eminently respectable woman, clad in a nurse's uniform, whose duties made her matron of the women employees and usually kept her in their rest room. Recently the industrial visiting nurse has been described as the interpreter of employer and employee to each other—the connecting link between the home and the workshop. In some cases she undoubtedly is, in others she is, unfortunately, just another person on the pay roll. That there are many nurses ill equipped to shoulder the important responsibilities intrusted to them, no one in touch with the demands of a nursing field will deny, but this is a truism applicable to all lines of effort nowadays.

A good visiting nurse, well trained in hospital and district work, with intelligence to apply her knowledge to each concrete case of illness or need, and vision enough to see the economic background in which the firm or the employer or the employee is but a unit, can do much for her patients, their families, and their firm. Her duties combine home nursing care and practical advice regarding

the prevention of illness, restoration to health, homemaking, housekeeping, and budget spending, as well as the promotion of lunch rooms, rest rooms, library stations, first aid, etc., in the factory.

The amount of work that such a nurse is able to accomplish depends both on her own ability and on the willingness of a firm to carry out her suggestions for the benefit of the employees. A well-equipped nurse is rarely willing to stay with a firm that does not wish to make her work count in the employees' behalf. She does not consider herself engaged simply to do minor dressings and make the firm look interested in the welfare of its employees—she wants to work with a live concern whose interest in this welfare is as sincere as it is constructive.

A visiting nurse's knowledge of existing agencies, free dispensaries, hospitals, convalescent homes, and relief societies, and her ability to secure more considerate rates for dental work or much needed medical or surgical treatment, are not, as a rule, shared by nurses whose work has kept them closely confined in hospitals or dispensaries.

Occasionally we are told that employees do not wish welfare work; given higher wages, they will better their own conditions. Welfare work, whether medical or otherwise, done by a firm that refuses a living wage to its workmen is a truce with darkness. It would be a poor type of nurse who would lend her training and brains to further such iniquity. Employees are human beings, who resent a paternalism which, in its destruction of a sense of personal responsibility and initiative, is just as harmful as a total disregard of the workers' well-being. The unfortunate feature of such welfare work, whether in colleges or workshops, is that its administrators are more frequently "well-meaning" than selfish, but the term "well-meaning" is not one that an up-to-date American business man likes to have applied to any department of his work.

The presence of the visiting nurse in home or workshop is rarely resented if her first interest is to restore order in a disorganized household, and to make the employee happier and therefore more efficient. A healthy workman is a good investment for himself as well as his employer, and, apart from the moral obligation of every man to his employees, there is an economic side to this preventive work that raises it above the level of philanthropy or purely picturesque welfare work. Well people are more contented as well as more vigorous, and, in spite of pessimistic croakings to the contrary, the strong laborer can find as much pleasure in his work as can the man higher up.

A good nurse is sure of her welcome if she is allowed to occupy a neutral position that will enable her to see both the employer's and the employees' viewpoint. Her vision will become warped if she sees only with the eyes of the employment manager, or if her unbalanced sympathy enables her to get simply the viewpoint of a disgruntled employee.

Industrial nursing must be established primarily for the employee's benefit. At best, the week's pay envelope stands between many families and want. The loss of a full day's pay is not a thing to be borne lightly by any worker. The weight of illness and sorrow which the average family bears bravely would be overwhelming if some helpful hand were not stretched out to ease the burden. But the manner in which this help is given is important; the employer should not give it as a gratuity, the employee should not demand it as a right. If it can be given so that loyalty to the firm as well as self-respect may be maintained, nothing but the right sort of appreciation will be felt on both sides. A good visiting nurse ought to be able to carry this sense of obligation and sympathy and interest from the shop to the home; and, far from creating ill-will, she ought to be able to make the warmest sort of feelings exist between the employees and their employers.

The woman able to establish and maintain this sense of mutual obligation and dependence is not an average person. She should be a well-trained nurse, a graduate of a good school, experienced in visiting in the homes of small wage earners, with some knowledge of social work. She should be a student of books as well as of people; she should have a personality that makes her equally welcome in the office of the president or in the home of the office boy; she must like people for themselves. She must do the work primarily because of her interest in it—not because it is to her simply a means of existence. Women of this stamp are not easy to find—they are not commonly found in industrial nursing because so many openings are constantly coming to them that the salaries and opportunities offered by corporations are far below those offered in other positions.

Too often an industrial visiting nurse is but a well-trained, well-intentioned woman, with no special preparation for an important piece of sociological endeavor. Such a nurse can do good work, but she rarely can do the big constructive piece of honest welfare work desired by most employers. The position of visiting nurse for any firm should be one of dignity as well as of re-



sponsibility. No nurse should be engaged because her knowledge of illness and minor accidents may enable the firm to dispense with the services of a paid physician, for a nurse is not trained or licensed to practice medicine. Neither should she be engaged to follow up absent employees who are suspected of malingering, nor can she do the best work for employees if she spends the better part of her working day in a little dispensary waiting for accident cases. A comprehensive plan of good industrial visiting nursing includes a staff of nurses large enough to enable the firm to have a nurse on hand for emergencies and other nurses for home calls.

The complexity of modern industry—the advent of foreign-born men and women, the introduction of powerful machinery, the strenuous, if unavoidable, competition, the deadening “system”—all these conditions help increase unrest and misunderstanding among the enormous body of American workingmen. We must put a new valuation on a vigorous, healthful life. Existence alone is not enough. “Safety first” implies sane welfare work. This means that the employer is willing to recognize that his employees are human beings, worthy of his respect and not unable to respect themselves. The advent of the visiting nurse in industry means that this better understanding between firm and pay-roll will come about more rapidly if the right sort of graduate nurse is put in charge of the welfare work that every firm will eventually desire to give its employees.

EDNA L. FOLEY.

#### Death of Dr. Paul Paquin, Noted Health Commissioner of Kansas City

Dr. Paul Paquin, director of public health of Kansas City, died in that city on June 22, from a disease supposed to have been tuberculous in character, probably tubercular meningitis.

Dr. Paquin was a Canadian, 56 years old, a graduate of McGill University of Montreal, and had fought tuberculosis ever since his graduation. He had studied under Pasteur, Latteux, and other famous European teachers. After a post-graduate course in histology at the University of Missouri, he inaugurated the first hygienic laboratory in that state as secretary of the State Board of Health, and did much for the regulation of the sale of meats and other food stuffs. It was said that he founded the bacteriological laboratory of the Battle Creek Sanitarium, and later moved to Asheville, N. C., where he conducted a tuberculosis sanatorium for seventeen years.

He had lived in Kansas City only fifteen months, having moved there to become the city's

health officer. He cleaned up Kansas City, built a splendid tuberculosis hospital, set in motion a department for the teaching of sanitation in the public schools, provided for a new and efficient method of garbage disposal, and secured almost a blind cooperation in his efforts on the part of the people of Kansas City, to whom he had be-



DR. PAUL PAQUIN.

come an inspiration. Dr. Paquin leaves a wife and one daughter, Mrs. B. M. Williamson, of Philadelphia.

When Dr. Paquin went to Kansas City as its chief health officer, he did so in the face of a tremendous political opposition, and during the incumbency of that office he fought politics and cleaned the health department of its insidious influence as completely as he had cleaned the city of its dirty streets, bad sewage, and unhealthful conditions. Before his death, politicians had come to realize his worth and were heartily and enthusiastically supporting his efforts.

It is not many men who are given an opportunity to be of service who have taken so tremendous advantage of it and who have done so much.

#### The Aims of Industrial Welfare

Welfare systems comprise the organized efforts of employers to render services to their employees above the payment of wages. Practically all large industries have made some efforts to better their employees' conditions. The National Cash Register Company, of Dayton, Ohio, is probably the pioneer in these efforts. Among public utilities, telephone companies are the pioneer welfare workers, chiefly because of the large number of young women employed in this industry. No welfare system is perfect, for even the

idea behind welfare work is new and largely in an experimental stage.

The subjects that concern the average worker are subsistence for the day for self and dependents, provision for the future for self and dependents, and—far below these two—amusement and recreation.

Immediate subsistence is provided by the employment itself. The service an employer can render the employee to lighten the work of the latter is to make working conditions as sanitary, convenient, and comfortable as possible. Endurable sanitary arrangements are almost universally compulsory by state laws, and medical examination and supervision of employees should be equally as necessary. To have apparatus and tools and surroundings convenient is a very slight exhibition of business acumen, and to have any tool other than as convenient and practical as possible is a losing financial proposition. The same considerations apply to comfort. The greatest practical convenience and comfort profits the employer by increasing efficiency and consequently increasing profits.

Provision for the future is a more serious consideration. Old age and loss of capacity to earn is the fate of every worker whose life is not cut off by premature death. It is an old thought that nothing is more certain than death, nor anything more uncertain than the time of death. The normal employee must plan for a normal length of life, and provide for self and dependents for the time when old age or its alternatives come on him. The best provision for this time may fail through no fault of the planner. Large families, long and serious illness, accidents, unfortunate investments, may wipe out a life's savings at the time they are most needed. The greatest service the employer can render his employee is to so arrange conditions that the employee may be spared the otherwise impending burden. Affairs in modern industries are so rushed and so exacting that they rapidly consume the best part of a worker's life after years of preparation, and, except in rare cases, there is no further use for the wornout worker. The industries accumulate funds to provide for depreciating machinery and obsolete plant, and will utilize waste as much as possible. Morally and socially it is just as necessary to utilize the waste of workers and provide for the depreciated human machines. This will be accomplished either by the action of all employers or by the power of the state. Where the state intervenes to make such provision, it generally goes further and takes the industries themselves to guarantee the provision, as in the case of the German empire today. A great number of the industries of our

country have responded nobly to this human need, and make liberal provision for the wornout or injured worker, as is shown by the articles published in this journal on this subject.

Provision for the future can be made in two ways—by direct additions to the savings of the employee and by funds accumulated for this purpose by the industry and by it applied for the benefit of the employee when needed. Examples of direct additions are the profit-sharing and stock-selling plans. The phase of the accumulated fund is well illustrated by the pension, sickness, accident, and death benefit funds of the American Telephone and Telegraph Company. It is conceivable that a combination of the two methods would be more advantageous than either separately. Both have numerous advantages and some disadvantages, and which one would be advisable in a particular case would depend largely on the employees and the industry itself.

Amusement and recreation is a third, but minor, part of an average person's concern. Associations and family ties often supply these without assistance from the industry. Some feature of this character is always desirable to provide the proper esprit de corps and loyalty to the industry. A fault with many welfare systems is that they confine themselves too exclusively to this feature and do not provide sufficiently for other more important parts of possible welfare work.

The industry's obligation is not covered by merely paying wages and directing works. It uses up human life, and it is therefore morally obligated to protect what it cannot use in the individual worker's life after extracting the serviceable and leaving only waste. Welfare work is a recognition of this fact, and is an endeavor to remedy this defect of modern industrial life. Many industries have done much—much more remains to be done. The majority of the great industries are studying this important proposition in its various ramifications, and are experimenting with possibilities to ascertain and follow the best methods of ameliorating the condition of their employees. It is hoped that the brief description of the welfare systems of some of the industries in this issue may be of material assistance to all in their individual attempts.

JAMES P. DUNCAN,  
Chicago Telephone Company.

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#### A New Department—Industrial Welfare

THE MODERN HOSPITAL has been publishing from month to month, during the whole period of its three years' existence, articles on industrial welfare, and has been giving a good deal of space



and much thought to this important subject. During the past year, however, this vast field of health service has been in process of crystallization along some definite and pretty well-defined lines.

This number of THE MODERN HOSPITAL speaks for itself, and for the appreciation of industrial employers all over the country, concerning the importance of welfare as a material part of their factory products. No artificial inducement, and no special pleading by publication, could have collected the vast amount of valuable material that THE MODERN HOSPITAL is publishing in this number and has available for publication in future numbers; only a spontaneous response on the part of industrial employers, expressing a great and vital interest in a topic, could have brought about this result. The time seems opportune, therefore, for THE MODERN HOSPITAL to set apart certain of its pages to be devoted each month to discussions of welfare problems in the industries. A journal ten times the size of this issue of THE MODERN HOSPITAL could not have contained the material in hand, and much of this material is too valuable to be lost. Some of it will, therefore, be published in the special welfare department hereafter. Many others besides those who have already contributed material are deeply concerned about this problem, and stand ready to do their part to crystallize it and to create some standards for the conduct of industrial corporations. We shall, therefore, have available a great wealth of material and the mature deliberations and conclusions of many straight-thinking, far-seeing employers who will express themselves in future numbers.

But we do not propose to limit our study of industrial welfare problems to employers; we propose to go to the thinking men and women among the employed, and obtain first-hand information as to what they think about what is being done and about what should be done in the future. We propose to go to the public, and to have expressions from the serious-minded, thinking people who occupy positions on the side lines, as it were, and who see what is going on from a disinterested viewpoint. So that not far in the future we shall have a many-sided view of this problem of industrial welfare, and without question we shall lead to some satisfactory conclusions and to some standards, methods, and processes. If we shall have shown the undesirability of some features in industrial welfare as it is now conducted, and the desirability of other features that are not now in common practice, so much the better for employers, vast sums of whose money is being expended in this work, and so much the better for employees whose health,

happiness, and even lives are confided to the issue.

For the September and other early issues we have the following articles: Cooperation Between Employer and Employee Insures Advantageous Welfare Work; The Value of Employees' Medical and Social Service Department; Where Welfare of Employees Is Considered of Great Importance; Good Light for the Factory Worker; and accounts of the welfare work of Macy's, New York; Lowe Brothers Company, Dayton; Saxon Mills, Spartanburg; L. S. Donaldson Company, Minneapolis; Gordon & Ferguson, St. Paul; John Wanamaker Store, Philadelphia; National Lamp Works, Cleveland; Commonwealth Steel Company, St. Louis; Bush Terminal Company, New York; H. Black & Co., Cleveland; Eastman Kodak Company, Rochester; Firestone Tire and Rubber Company, Akron; Remington Arms and Ammunition Company, Bridgeport.

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#### Industrial Welfare Work—Boiled Down

Welfare work in the industries might be properly divided into seven parts, as follows:

1. Protective devices in the factory.
2. The industrial dispensary—to dress hurts, to treat ambulatory ailments, and to examine complaints of employees.
3. The examination room—to examine candidates for employment, and to make periodic examination of employees engaged in occupations that give rise to "occupational diseases." Sometimes this and the dispensary are one.
4. The cafeteria or midday lunch room.
5. The social service agency—home observation and visiting nursing.
6. The pension and benefit department.
7. The clubs, athletic and social groupings.

**PROTECTIVE DEVICES IN THE FACTORY.**—It would be well outside the realm of this special number of THE MODERN HOSPITAL to attempt to take up the problem of protective devices in the factory, although this is without doubt the most important feature of welfare work. But it is also largely compulsory in the industries in this country, because of legislation, such as workmen's compensation, employer's liability laws, etc.; so that it may be left to a future special number of THE MODERN HOSPITAL to discuss industrial protective devices.

**THE INDUSTRIAL DISPENSARY.**—The dispensary is set down as the second feature of welfare work in industrial plants in that it meets the employee at the very outset and incipency of an ailment or illness likely to interfere with his working capacity. Nearly all industrial corporations have such a dispensary, elaborate if the number of em-

ployees is large, so that the work has to be systematized, and simple in form and equipment if the number of employees is small. In the dispensary the trivial hurts received at work have attention. It is a rule in nearly all factories that employees who receive even a scratch are sent to the dispensary for examination and such treatment as may be required. In the dispensary many corporations also give medical attention to those of their employees who are not sick enough to be in bed and are too sick to be at work.

There is a very large and insistent question about the medical care of industrial employees, and many corporations are asking themselves and responsible outsiders whether an industrial corporation should minister to the needs of their employees suffering from medical ailments not contracted in their work. Some employers take the ground that employees are entitled to a choice of their medical attendants, and that it is no part of an employer's duty to interfere with this choice, and no part of the employer's obligation to pay for such outside attendance. These employers also take the ground that they do not wish to interfere in the medical profession or to detract from the earnings of physicians in private practice.

Other employers assume the attitude that most employees are not wise in their choice of a private physician, and hence they do not get the best care in such cases and that their illnesses are likely to be prolonged, and that the corporation must stand the expense of such prolonged illness in the shape of payments of sick benefits. These same employers take the ground that their own physicians, selected by reason of their professional ability as measured by the highest standards in the medical profession, should be able to give a better care to the sick than the average employee would get on the outside, and they argue also that there could be no motive and no temptation on the part of their own corporation physicians to serve any purpose but the very best good of the employee and of his return to the highest working efficiency in the shortest possible time. This question is not yet settled.

**THE EXAMINATION ROOM.**—The laws of most states provide periodic examination of employees whose occupation, under the statistical data of the Government and other responsible agencies, might give rise to occupational diseases. This examination is imperative, and a place must be had in which to do the work. In some corporations the dispensary examination rooms are employed during off hours to make these periodic examinations.

There is no doubt that in the near future industrial corporations will, as a part of their duty to the public as well as to their own employees, make

periodic examinations of employees to catch incipient diseases such as the heart lesions, the organic kidney diseases, bad eyes and bad teeth. Some of this work has already been done, although the corporations as a great class have not yet undertaken it as a routine part of their welfare service. Dr. S. S. Goldwater, as commissioner of health of New York city, is responsible for having instituted these periodic examinations in a large way, and his leadership has shown that a vast majority of employees need these examinations, and the advice and counsel that would necessarily follow them, in order that the employee might be guided away from beginning disease.

**THE CAFETERIA.**—A great many corporations make an important feature of their cafeteria or midday lunch for employees. There is no doubt that employees who can have a properly selected, properly prepared, and properly served lunch at the midday hour will keep well more uniformly, will maintain a higher efficiency at work, and will live longer and be happier, because home lunches are not calculated to sustain the average employee in a factory and maintain good digestion and full nutrition. Most corporations are serving these cafeteria lunches at a lower cost than employees would otherwise have available.

Some corporations have gone farther than others and have placed their cafeteria luncheon service on a plane approaching a scientific dietary. Perhaps the most notable example of this is the National Lamp Works, of Cleveland, and its fourteen branches in different cities. Some very carefully studied principles are involved in the luncheon service in this corporation. For instance, in the Cleveland factory a charge of 6 cents is made for a cup of coffee, because the corporation believes that coffee is not a good and nourishing beverage for its employees, at least the young women; but a certified, sweet milk, attractively served, costs only 2 cents, or less than the wholesale price in this same factory, because the employers believe that milk is a better beverage for its young women than anything else; and the same care is exercised in the preparation and service of the rest of the menu.

On this same point one very large corporation, whose work is heavy and whose employees are men, made some very careful statistics not long ago, and found that a very large percentage of its factory accidents occurred between 12:45 and 1:30 in the afternoon. Further inquiry developed the fact that most of the men were sending out of the works for beer as the beverage of preference for their midday meal, and it was suspected that perhaps beer had something to do with the great number of accidents that were occurring.



A rule was then instituted forbidding the opening of the gates at the noon hour, and, instead of the beer, employees were given large portions of sweet milk without cost to them, and this same corporation has reported that its accidents at the hours above named were reduced to a negligible percentage.

There is no doubt that the cafeteria luncheons served by most of the corporations are capable of improvement at the hands of trained and thoughtful dietitians, and that instead of heavy, indigestible and unnutritious articles of food, corporations will serve to their employees a far different dietary for the midday meal.

THE SOCIAL SERVICE AGENCY, HOME OBSERVATION AND VISITING NURSING.—There is a doubt in the minds of a good many corporation directors whether it is the business of a corporation to invade the home of an employee, except for purposes of inspection, when the employee is reported sick and asks for a sick benefit. The best information, however, seems to be that a great amount of good can be accomplished, not only for the employees, but for the corporation itself by that close personal surveillance and supervision that comes of visiting nursing in the homes of the people. Many corporation employees draw wages that do not permit them even luxuries of sanitation and good hygienic surroundings, and there is no doubt that even people who know better grow careless and indifferent to their home surroundings under the pressure of financial stress, and neglect even those precautions that require only technical changes in the manner of living and that do not require the expenditure of money. Visiting nurses are enabled to secure the confidence of the people in the home, and to impress on the mother of the family, for instance, that ventilation and cleanliness cost little or nothing, that flies in the summer are unnecessary, and the huddling together at night of large numbers of people, especially children, is hurtful. The older children in a family may be working for the corporation, and may be sleeping in a room illy ventilated that is occupied by several other children. The working young person under such circumstances is rendered inefficient and unfit, and the corporation can serve its own purposes by looking after such details. Oftentimes illness is caused in a working member of a family by poor or badly cooked food and by unsanitary surroundings, and reports sick for the purpose of the sick benefit and to retain his or her place. A visiting nurse can often in such a case inspire the removal of the cause of the trouble. These same visiting nurses can also inspect for sick benefit purposes, and thus reduce the expense of that department in so far as the

expenditure only concerns the altruism of the corporation.

THE PENSION DEPARTMENT.—There is almost nothing to be said just at this place about the pension regulations of American corporations. This feature is being extremely well cared for, and corporations, as a rule, are providing abundant funds out of their own resources or are making up a very large proportion of such funds, employees being assessed comparatively insignificant amounts as their share. In another place the details of the pension arrangement of the Western Electric Company, a corporation employing 15,000 people, are given. In that corporation there is a million-dollar fund appropriated by the corporation itself as a nucleus, and the corporation adds to this fund as occasion may require. For instance, following the great Eastland disaster in the Chicago river a year ago, the company paid more than \$100,000 in death benefits and undertook pensions to even a larger amount.

Sick benefit funds are usually participated in by the employees themselves, and there seems to be a consensus of opinion that such funds should be administered jointly by the corporation and by trustees selected from the employees, the latter usually preponderating in numbers in such boards. But it seems to be a curious thing that, where the corporation is the dominating spirit in the control of sick benefits and even pension funds, there is a more liberal interpretation of the needs of employees than where the employees themselves, through their chosen trustees, dominate such funds. This number of *THE MODERN HOSPITAL* is so full of first-hand experiences, as told in the various papers, concerning the handling of pension and sick benefit funds, that there seems little more to be said about it.

THE CLUBS, ATHLETIC AND SOCIAL GROUPINGS.—There is a very widespread doubt in the minds of employers whether the social affairs of corporation employees are either a paying investment for the corporation or are appreciated by the employees. It seems to be almost the unanimous opinion that the usual annual picnic of the employees is a good thing, and that it has a wholesome influence in bringing employees together at very rare intervals and under circumstances that minimize the factory atmosphere; but there are other employers who think that their employees' leisure time should be at their own disposition and that they should be removed as far from the factory atmosphere as possible. One head of a large corporation, commenting on this point to the writer of this epitome, suggested that he himself liked to get away from his associates in the business—that he preferred his friendships away from

the business atmosphere; and this same employer told of a unique experience that he had had that emphasized in his mind the difficulties and the undesirability of social agencies in the plant. At the suggestion of the welfare worker of the corporation he had consented to the creation of a musical organization on one occasion, composed of some fifty employees; these employees were given many extra hours off duty for rehearsals and preparations. He told of the culmination of all these plans in quite a grand musical festival held in one of the large theaters of the city over a period of three or four nights. At the end of the festivities the fifty employees who had been favored with off time and other luxuries demanded a continuance of these short hours and absences from work, and that eventually nearly all of them were dismissed from the service because they had been "spoiled" and had ceased to be desirable workers. He told, moreover, of the discontent that had permeated the ranks of the other employees because a favored few had had short hours and absences from work while they, the rank and file, had no such favors—and there was disorganization everywhere.

Another corporation head spoke of the bowling leagues and baseball nines. The corporation had hung up trophies for these various athletic sports; the men playing on the various teams were given off hours and all sorts of luxuries in the shape of luncheons, extra bath facilities, athletic rooms, and the like; and it was his experience that out of a corps of 5,000 employees less than 100 were interested enough in the various sports to attend the league games; so that all the expense and organization concerned in these sports were taken advantage of by only a small fraction of the total number of people employed.

Another employer told of a hundred-thousand-dollar club room, the gift of the widow of the originator of the business, of the splendid equipment in the rooms, of the recreation facilities provided there, and he said that less than 1 percent of the corporation's employees made use of those splendid quarters, and these were foremen who went to the reading rooms to consult periodicals, and sometimes officers who went there to play games; but that the rank and file of the employees never went there.

There are doubtless other and contrary experiences, but the men who gave these experiences had all risen from the ranks and were deeply concerned for the welfare of their fellow-workmen and workwomen.

### An Apology

We hope that the regular readers of THE MODERN HOSPITAL, and the hospital people generally, will find in this Special Industrial Welfare number food for thought and much information of value, but it is to be regretted that the importance of the subject and the enthusiastic reception of the proposal to create such a special industrial welfare number by those in the industries has made it necessary to withhold very much of our regular contents. Next month we shall try to make amends.

### Indian "Caste" in British Hospitals

Soldiers from the East Indies, fighting for Great Britain against the Germans, are a great problem in English hospitals when they are sent across the channel wounded. The "caste" question causes the trouble, and even an English medical officer who has been stationed in India for years seems unable to fathom the mysteries of Indian "caste." A correspondent of the *Medical World* writes as follows in regard to this subject:

Major S. James, chief of the hospital, which is equipped for 2,000 patients, and is conducted by officers of the Indian medical service, described the provision made for enabling Indians to live in accordance with the customs of their own country, and pointed out various conditions which must be strictly observed to prevent patients losing caste. They have to serve eight separate diets, cooked in twenty-one cookhouses in the hospital grounds, for the patients. For the staff sixteen other cookhouses are in use in the village. The Hindu cooks have to be of the same caste as the patients they cook for, or else higher. No beef is allowed inside the hospital, as the cow is a sacred animal to Hindus. Bacon and pork are also prohibited. As Indians must themselves slaughter the sheep they use for food, and in their special manner, a slaughter house has been provided for them. Hindus sweep off the head of the animal with a single stroke of a talwar or sword. For Mohammedans the mouth of the animal must be pointed toward Mecca.

The hospital requires sixty or seventy gallons of water per man a day—not so much when it is remembered that an Indian must bathe before prayer, and that a good Mohammedan must pray five times a day. The flooding of the bath rooms is a common trouble, as the patients neglect to turn off the water. Before the electric light was in use they persisted in blowing out the gas, so there was always danger of poisoning. As Hindus who die must be cremated by members of their own caste, a site has been set apart for this, and the funeral ceremonies can be carried out as precisely as in India.

Mr. Clement (deputy surveyor) estimated the consumption of water at the Kitchener Hospital as over 100 gallons a day. He added that one amiable failing of the Indian was to turn on the hot water and wait until it cooled to a comfortable temperature for bathing.

Prescott, in his "Conquest of Mexico," states that hospitals were established by the Aztecs in their principal cities for the care of the sick and the permanent refuge of disabled soldiers, and surgeons were placed over them, who, in the words of a cynical chronicler, were so far better than those in Europe that they did not protract the cure in order to increase the pay.—Richard Dalton.

The success of a movement for the establishment of a Catholic hospital at Gallup, N. M., appears to be secured, and it is expected that the erection of a \$50,000 building will be started soon. The institution will be conducted by the Sisters of St. Francis of Lafayette, Ind.



## WELFARE WORK—STORIES FROM THE VARIOUS INDUSTRIES

**An Attempt Is Made in These Pages to Epitomize and to Present Only the High Lights of Health and Betterment Service in a Few Prominent Plants in a Number of Branches of Industry**

**Chicago Telephone Company, Chicago, Ill.**

BY JAMES PRENTISS DUNCAN, Chicago, Ill.

If the popular conception of the soulless corporation were true of the Chicago Telephone Company, the company would get its employees in any available way, assign their duties, see that they were performed, pay them what it was compelled to, and have no further interest in the individuals comprising its force. The popular conception is wrong. The company wants to make money and to pay a legitimate return on the capital reasonably invested in it, for only by doing this can it justify existence. Experience has taught that the easiest way to accomplish this permanently is to get the best

as ideal as possible. This is the policy of the company, for betterment work results in more satisfied employees and consequently better telephone service, the ultimate aim.

As a part of the American Telephone and Telegraph Company, the employees of the Chicago Telephone Company are included in the pension and disability benefit funds, which are probably the most comprehensive schemes for the benefit of employees that have ever been established by a corporation. They are without expense to the employee, and, except in case of accidental injuries, are limited to those of over two years' service with the company. The pension scheme provides for the

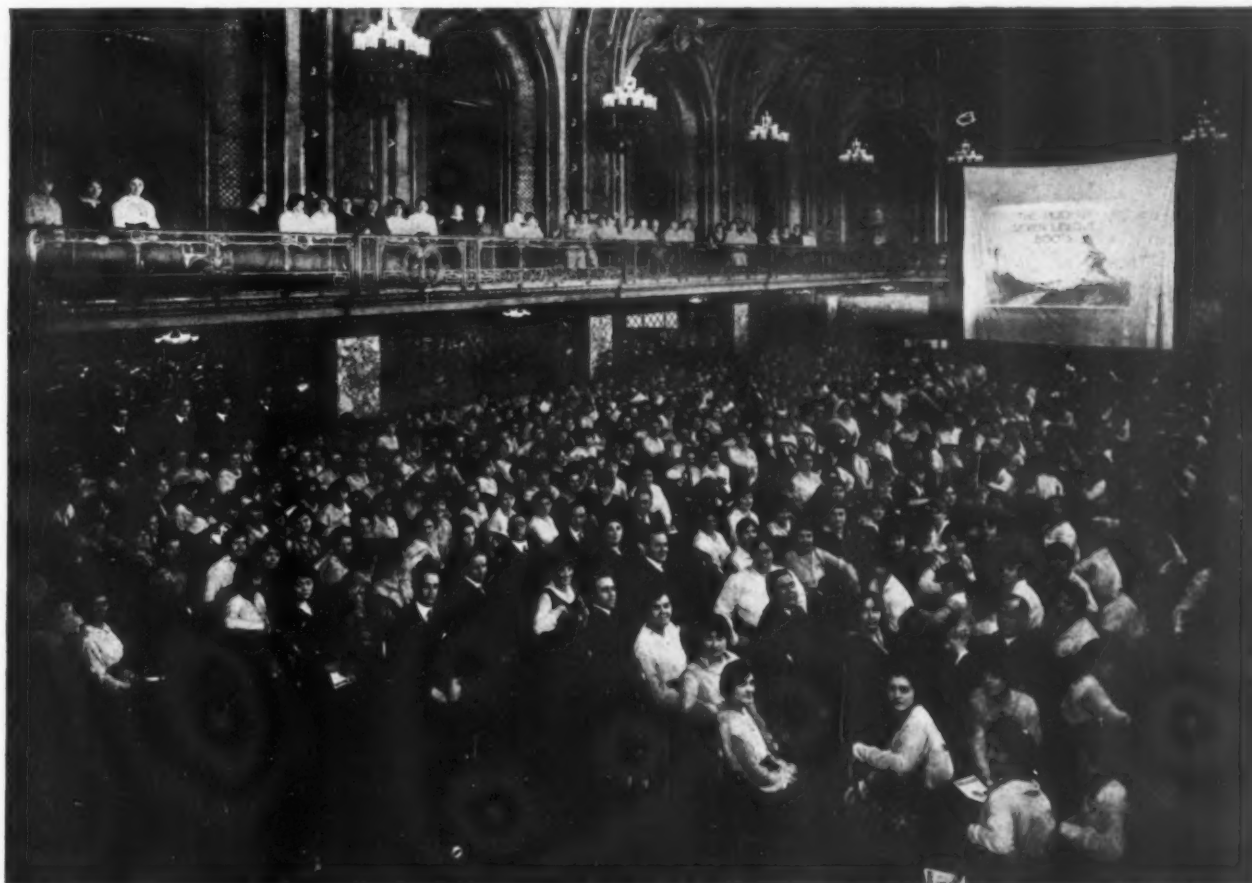


Fig. 1. Chicago Telephone Company. Entertainment at Congress Hotel.

Operators seeing moving pictures of "The Modern Seven League Boots."

employees, treat them in the best possible way, and do as much as possible for the employees, for without the loyalty and devotion of every employee the company is in peril. To secure this loyalty, on every possible occasion attempts to help its employees are made by the company.

The Chicago Telephone Company has been a pioneer in much of its "betterment" work—that is, in the things done for the employees for their betterment, beyond the doings of a typical soulless corporation. It has made and will continue to make every reasonable effort to be fair and just to its employees and to make working conditions

retirement on a pension of employees of certain ages and after completing certain terms of employment. The amount of the yearly pension is 1 percent of the annual average pay for ten years multiplied by the number of years in the employee's term of employment. The minimum, ordinarily, is \$20 per month. Benefits are paid to employees accidentally injured in the course of their work, regardless of the length of service. Benefits are paid to employees unable to work on account of sickness, the amount varying with the term of employment. Death benefits are paid to the employee's survivor where the death is caused by sickness after five years of service.

Death benefits for accidental deaths are paid regardless of the term of employment.

This fund is under the direction of the Department of Relief and Safety. This same department includes the Bureau of Employment, the Health Department, and the "Safety Work" of the Company, thus combining under one control the records of the employee from his beginning with the company. The Health Department exam-

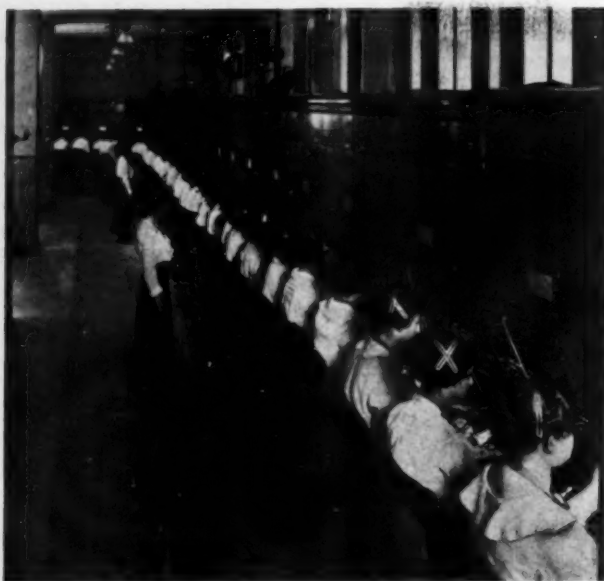


Fig. 2. Chicago Telephone Company. Operating room at Harrison office. Note arrangements for light and ventilation, rubber matting on floor, foot rests, and backs on chairs.

ines new employees before they are permanently located, exercises general supervision of employees who are drawing benefits by reason of sickness or accident, provides free counsel and advice to any employee who wishes to consult a physician for himself or family, and takes care of accident cases. The purpose of this department is to prevent the employment of persons who may transmit disease to fellow-employees, or who are not physically able to perform the duties required of them. After employment every effort is made to advise the employee how to keep in good condition and what to do in case of illness. To this end demonstrative lectures are given on first aid to the sick and injured. Medicine cabinets, etc., are maintained at exchanges, and there are first aid kits supplied to all line gangs, with complete instructions for their use; visiting nurses are employed to visit employees, and reexaminations of employees are made. The staff of this department consists of six doctors (one of whom is a woman) and three nurses. The work of this department has been very successful, and its results are apparent in the improved health of all the employees.

Another general scheme in which the employee of the Chicago Telephone Company participates as a part of the American Telephone and Telegraph Company is the stock purchase plan. From time to time employees are permitted to purchase, very advantageously, stock of the parent company, payable in monthly installments, with accruing dividends credited to account and interest at 4 percent charged on the unpaid balance. The employees have voluntarily subscribed to this to a considerable extent.

A loan fund has been created by the Chicago Telephone Company to assist its employees in times of misfortune. No interest is charged. A relief fund has also been established, from which assistance can be given the

employee when the circumstances of his case make it impossible or undesirable to apply to the loan fund.

For several years a magazine, the *Bell Telephone News*, has been distributed free to all employees. It is a thirty-two page illustrated monthly, well edited, and covers the happenings of the month in the business, and furnishes news regarding personal happenings to the employees.

Almost 50 percent of the employees of a telephone company are operators—young women. Since their employment the policy of the company has been to treat them with the utmost consideration, for the public meets the company through the operator, and derives its impression of the whole system from this part. A contented and happy operator makes the best impression. To secure this sort of operator has been the endeavor of our engineers; ventilation, heat, the most comfortable chair, the height of foot rests, the size of the switchboard, have all been objects of special study to adapt them to the comfort of the operator while working.

The operators pass a physical examination before employment. Lectures and exercises on the use of the voice, calisthenics, general hygiene, etc., are given in the school where they are taught their work; all the steps necessary to get and keep a fine, healthy force have been made. Toilet, sanitary, and other comfort arrangements are as perfect as possible. Where space permits, pianos, victrolas, gardens, etc., are provided. Always there are rest rooms to which the operator may retire. Libraries, individual towels and telephone sets, lockers for street clothes, and many other devices are used to keep the operator as comfortable as possible. This is carried to the length of providing dry stockings and shoes for her



Fig. 3. Chicago Telephone Company. Lunch room at Oakland office.

wear during wet weather while her own are drying. Her health is of the utmost importance, and the attempt is made to preserve it in good condition, preferably to curing after it is affected. The length of continuous service is strictly regulated, the working day of eight hours being broken by a fifteen-minute rest, a half-hour lunch period, and another fifteen-minute rest at intervals of two hours. A nutritious luncheon is served in cafeteria style free, and the amount of food is not limited. As the work of telephoning is continuous, many problems arise which the company has solved with rare forethought—luncheon at night, breakfast before leaving in the morning, two hours sleeping period, all assist in preserving the operator's health.



Every effort is made to win back their health if it is affected during employment. In conjunction with the Chicago Tuberculosis Institute, in 1913 a 6-bed shack was built at Naperville under Dr. Sachs' supervision. Every precaution is taken to discover any incipient cases of tuberculosis. Fortunately, few have been found, but those few who have been sent to Naperville have justified the expense of building the shack. Invariably the disease



Fig. 4. Chicago Telephone Company. Rest room at Edgewater office.

has been arrested, if taken in time, and the girls have returned cured. In the search for health, girls have also been sent as far as Colorado, Canada, and New York.

There is being built at Warrenville a recreation home for the girls, provided with all comforts. This work is the result of experiments made in preceding years at Highland Park and Lake Bluff, in which places many of our operators who needed country air, good food, and surroundings were satisfied, and returned happy and healthy after a delightful vacation.

There are many other ways in which the company expresses its friendship for the girls besides sharing in the general features outlined above. The chief operators are chosen not only for telephone efficiency, but for friendly

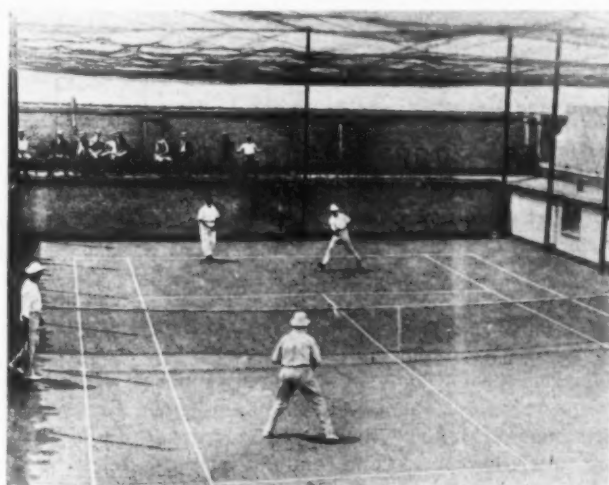


Fig. 5. Chicago Telephone Company. Tennis court on roof of main office.

interest in the force; matrons are in the exchanges, who help "mother" the girls, and the welfare department, through nurses, goes to their homes, and advises and assists those who are sick or in trouble. Social affairs are encouraged. The entertainment pictured, showing a film

made by the company with employees only, was given seven times to accommodate all. Dancing and a banquet accompanied the pictures. Smaller gatherings are frequent, and provide much pleasant amusement.

Every precaution is taken to guard the operators, to select bright, competent, attractive girls, earnest above the average business girl, and to make telephone operating the most desirable profession for a young woman. Permanency of position, opportunity for advancement, and the most congenial of surroundings are offered to retain them. This results in unusual efficiency, but carries a penalty of its own. Our statistics prove that the vast majority of resignations are for the purpose of being married. It is not because they are telephone girls that they marry so readily, but because telephone girls are recruited from the class of girls that are of the most marriageable sort, and their employment has not injured them, but, on the contrary, assisted in their improvement.

The betterment work for the other employees, except the operators, is in charge of the heads of the various departments and, in a general way, under the supervision of a central committee. As the great majority of these

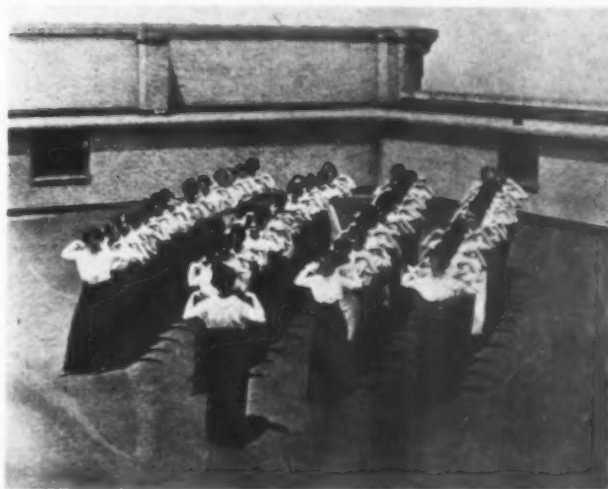


Fig. 6. Chicago Telephone Company. Calisthenics on roof of main office.

are men, the betterment work, beyond the general features first outlined, takes the form of recreational and athletic features. In many cases the company furnishes the equipment or the place for these various recreations. For example, there were last year twenty-six uniformed baseball teams playing Saturday afternoons. Eight additional teams were made into a junior league for boys under 19. Prizes were offered to winning teams by the company. Equipment was provided, and in the past a ball park has been leased for these teams, but the many parks of Chicago well equipped for such sports have made this unnecessary. Basket ball, indoor baseball, bowling, chess and checker, camera, rod and gun, sewing, tennis, track and field, players', golf, indoor golf, and gardeners' clubs are organized. There is also a Monday luncheon club attended by from 150 to 250 men, where a speaker or other entertainment is provided, only the cost of the food being paid by the members. A woman's lunch club of similar plan is just organizing. The glee club is very successful under the leadership of one of the best choral masters in the west. The band and orchestra, each composed of over fifty members, do very creditable work for amateurs, and have frequently provided music for the entertainment of the other employees as well as

of themselves. These recreations for the men in the offices are often the only physical exercises regularly taken, and for the outside men they are pleasing variations. They are encouraged and enjoyed by all.

The accident prevention or safety work of the company for men has taken the form of articles printed in the *Bell Telephone News*, safety bulletins, and pay check inclosures. Recently this department has begun giving illustrated safety first lectures. There has been a gratifying decrease in the number of accidents, and considerable interest aroused among the employees by this work.

In an educational way there are two schools for men conducted by the company. The plant school was organized in 1906, and has been attended by over 5,000 men. Practically every man in the department has received instruction in this school, to which they are assigned from time to time as new equipment is introduced and to make them more perfect in their usual work. The intent



Fig. 7. Chicago Telephone Company. New recreation camp at Warrenville, with some of the possible recreations.

is to increase the employee's general knowledge of telephony and make him more perfect in his work. Besides the school room instruction, correspondence courses, display panels, booklets, question boxes, and general lectures are used. In 1913 evening classes in telephony were given in the Chicago High School. The efficiency of the employees has been much increased by this school.

The office boys' school has been only recently started. Most of the boys are compelled to work, and are insufficiently prepared to enter business life; after a few years they are too old for office boys and not ready for other work; so through the Y. M. C. A. a course in penmanship and other elementary and advanced courses are given free of charge. It is hoped that through these courses the boys may be able to continue with the company in other positions after their period of usefulness as office boys has expired.

By its general features of betterment work the company intends to provide some insurance, financial assistance, and "savings" aids for the employee, to get the best employees, and to keep them in health and contented. By the special features for operators and for men it endeavor

ors to assist the employees in those things where experience has shown assistance is desirable. This is far from the policy of the typical soulless corporation. It shows on the part of the company a genuine interest in bettering the employee, and results in the employee being a loyal, devoted, and efficient part of the Chicago Telephone Company.

#### Interborough Rapid Transit Company, New York

BY H. H. VREELAND

Briefly, the purpose sought in the creation of a welfare department by this company was to provide a "central clearing house," as it were, for collecting and considering the views and ideas of employees and officials alike looking toward more scientific development in plan and scope, and more intelligently directing to the best advantage in economy and effectiveness the various phases of so-called welfare work which had evolved through the voluntary cooperation of employees and officials in doing those things which, socially and economically, made for their mutual betterment.

The affairs of the welfare department are conducted under the direction of a welfare committee, which is presided over by a director of welfare work. This committee, of which the director of welfare work is chairman, embraces all the staff officers. As chairman of the welfare committee, the director of welfare work ranks as a staff officer, reporting direct to the president on all matters pertaining to the activities of the welfare department.

**PLAN AND SCOPE.**—The affairs of the welfare department are conducted along these lines:

The director of welfare work, working hand in hand with the various "line" officers, makes a thorough study of all the conditions of employment in the various departments, frequently holding meetings of the men for full discussion of matters which, from their viewpoint, may be susceptible of improvement. Such things as these investigations develop which, in the opinion of the director of welfare work, involve neither a matter of policy nor the expenditure of a large amount of money, are immediately put into effect, while those improvements which do involve a matter of policy or the expenditure of money are referred to the welfare committee. The welfare committee, consisting of the various staff officers, meets once a month, and is subject to special call of the chairman, the director of welfare work. At these meetings all matters of importance affecting the general interest of the relation of employees to the management are freely discussed, and ways and means determined on for doing those things which, to the minds of all concerned, seem necessary to improve the general condition of employment, as well as the social conditions of the employees.

#### WHAT THE COMPANY IS DOING

**VOLUNTARY RELIEF.**—Some years ago the company adopted a plan of mutual voluntary relief, through which all might become associated for the purpose of securing specific relief for themselves and families in case of sickness, accident, and death. In the formation of this voluntary relief association the company supplied all necessary facilities for carrying on the work, furnishes the necessary administrative force without expense to the association, and guarantees the fulfillment of all obligations assumed by the association.

The voluntary fund provides for the payment of benefits to the sick or injured members, and for the payment of death benefits ranging from \$250 to \$2,000, depending on the class of insurance held. Any member who has been



continuously in the employ for a period of five years immediately preceding the termination of his employment by the company, and who has been a member of the relief fund for such time, may, with the approval of the advisory committee, on such termination of employment, continue to be a member of said fund, but only with the privilege and for the purpose of contributing, according to the regulations, to the minimum death benefit contributed for by him for the entire last five years of such employment, or to any smaller amount, provided that a supplementary application therefor, in the prescribed form, shall be made by him before such termination of his employment or within ten days thereafter. The fund for the payment of these benefits is created by contributions from employee members, and, under the regulations and provisions, there can be no payments out of the fund except for benefits. The surplus funds not required for current use have been invested in such securities as are legal investments for savings banks in the state of New York.

Provision is also made under the regulations that, in cases of extreme necessity, a substantial portion of the death benefit may be paid without formality; thus, in many instances distress has been averted or immediately relieved, and everything possible done by the department itself to save trouble and expense to the members and their families. This has resulted in many expressions of goodwill toward the association.

The affairs of the association are controlled by an advisory committee. The members of this committee are chosen equally by the employees who are members of the fund, and the board of directors, the president of the company acting as ex-officio. The committee holds stated meetings, at which all matters pertaining to the fund are fully discussed, with free expression of opinion by employees. The members selected by the employees are in constant close touch with their fellow-members, reporting to the relief association all matters requiring attention which come to their notice.

It is wholly optional with the employees as to their becoming members of the voluntary relief association, and officers of the company make no effort to induce employees to become members of this association. At present this association comprises approximately 60 percent of all the employees of the system.

**PENSIONS.**—The benefits of the pension system apply to the following cases:

Employees who have attained the age of 70 years, provided they shall have been in the service of the company or its predecessors not less than twenty-five years; and employees who shall have been twenty-five or more years in such service, and who shall, in the opinion of the board of pensions, have become physically and permanently disabled.

The acceptance of a pension allowance does not debar any employee from engaging in other business. The rate of pension is governed by the length of period of continuous employment prior to retirement, and runs as high as 40 percent of the annual average wages for the ten years previous to retirement.

**LOAN FUND.**—A loan fund has been established for the purpose of aiding employees who, by reason of sickness or death in their families, may be in need, thereby rendering it unnecessary for them to apply to outside sources for temporary financial aid. Under the provisions of the loan fund any employee, after having been three months in the service, may secure a loan without collateral of any nature up to an amount equal to twice his weekly wages. Money loaned on this basis is returned to the general fund

through a deduction from the pay-roll of 10 percent of the total loan each week, these deductions starting two weeks from time loan is made. If, for any reason, an employee finds himself embarrassed in meeting these weekly payments of 10 percent, there are several conditions under which the time is extended, the length of which depending on the merit of the individual case.

**HOSPITAL CARE AND MEDICAL ATTENTION.**—Members of the relief association, as well as employees generally, are entitled to the services of two regularly appointed physicians of the company, who maintain an office at No. 165 Broadway for the purpose of directing and supervising the care and treatment of the sick and injured. These physicians, however, do not actually treat the sick or injured at their homes, to the exclusion of a family or other visiting physician, but make necessary calls at the homes of employees or at hospitals for the purpose of ascertaining the nature or extent of the injuries or illness, and the probable period of disability. Employees are also privileged to come to the office of these physicians, without cost to them, for treatment of various medical and surgical ailments; also for examination and advice regarding ailments not necessarily serious, but which, unless treated and checked, may subsequently develop into disabilities.

Employees requiring surgical operations are taken to the Post-Graduate Hospital in New York city and placed in care of the chief surgeon of the company, who personally treats such cases and performs needed operations, or gives needed preliminary and subsequent treatment at the hospital dispensary. Cases not strictly surgical—notably diseases of the eye, ear, nose, and throat—are also sent to the hospital dispensary, and, according to the nature of each case, referred to various specialists. This opportunity for medical and surgical treatment is largely taken, and many operations for hernia, appendicitis, tumors, and various other ailments have been performed without cost to the employees. Through contributions made by the company, employees are also able to secure for themselves and members of their families free medical and surgical treatment at various other hospitals in the city.

**SUNSHINE COMMITTEE.**—This committee consists of an employee selected from each department of the company's service, with several officials of the company acting as ex-officio members. The duty of each member of this committee is to keep in close touch with his fellow-workers in the department in which he is employed, reporting to the committee all those who have met with misfortune and may be in need of assistance. Through this general scheme of organization, calling for a representative of each department of the service, there is small chance of overlooking or neglecting anyone requiring assistance.

The duty of the committee is to visit the sick and the homes of the dead, and, wherever possible, alleviate suffering and assuage the grief of relatives of those who have met with misfortune. This committee has a volunteer doctor and a committee of ladies—wives of employees—who visit the homes of those in need, and administer to their comfort during the period of distress. This committee has gone so far as to move and ship furniture, pay railroad fare, and each year makes it a practice to prepare and send Thanksgiving and Christmas dinners to families of employees in need of succor. The money to carry on the work of this committee is raised through picnics and outings and from contributions made by the company.

**VISITING NURSES.**—The scope of the duties of the visiting nurses is quite varied, and would require a volume were we to undertake to do the subject justice in explain-

ing in detail the various activities of this feature of the work, but, in a general way, it may be said to comprehend three principal divisions—namely, (1) employees, (2) their wives and families, (3) general duties, a few instances of which are indicated below.

Immediately on notification of a man's illness the visiting nurse calls on him, and, if it is evident to her that a doctor's attention is needed, a physician is called in at once. Where proper care of a sick employee is obviously impossible in his own home, arrangements are made for him at a hospital, and, if an operation is advisable, the company is at once notified and makes the necessary arrangements for his proper care. Many serious cases which have come to the attention of the visiting nurses have been handled most effectively and satisfactorily through this arrangement.

When a man is convalescing from an illness or operation, and the home accommodations or environment is not such as to prove conducive to a prompt and permanent recuperation, arrangements are made for him to go to either the Burke Foundation in White Plains, or some other institution of this sort for a period of two weeks or longer at no expense to the invalid. During the absence of the man from his home, or during the period he is at a convalescence home, it is part of the duties of the visiting nurses to see that his family is properly taken care of. If it is found that the family becomes temporarily embarrassed financially, arrangements are made for the payment of the rent and household necessities through the sunshine fund. During this period of convalescence it is also the duty of the visiting nurses to keep close watch over the general health and condition of the wife and children. If it is found that, because of worry, the wife is gradually losing control of her own physical well-being, arrangements are made for her proper care, or, if the children are in need of shoes, stockings, or anything of that sort, arrangements are made for their provision.

In case of the death of an employee leaving a widow and several children, and the woman desires to keep her home, the visiting nurse either tries to secure boarders for her and work of such character as may be done in the home, or, if the children have reached an age which will permit of her leaving the home, outside employment is found, and in this case the visiting nurse exercises general supervision over the home, looking out for the welfare of the children while the mother is away. The duties of the visiting nurses also involve explaining the proper preparation of all food and advice in the matter of economical purchasing; instruct and direct in the care and feeding of infants; discourage anything and everything that does not tend to produce good morals, and teach the value and necessity of cleanliness and the benefits of fresh air and sunshine.

In this, as in all other of the activities of the welfare department, the home of the pensioner is not overlooked or neglected, and the visiting nurse makes it a practice to call, at as frequent intervals as possible, at the homes of employees who have been retired from the service of the company with a view to looking after their general welfare and providing those things which may make for their greater comfort.

**EMPLOYEES' STORES—BAKERY.**—In an effort to reduce the high cost of living, the company, with the approval and cooperation of its employees, has established stores throughout the city of New York, upon the company's property, in which the employees are able to obtain all the necessities of life in the way of foodstuffs at actual cost to the company. In these stores only the purest qual-

ity of food is sold on the theory that it is quite as essential that the men obtain wholesome, pure food as that they obtain food at reasonable cost. These stores have been equipped throughout with fixtures of the most modern type, including freezing plants and general fixtures, insuring the highest possible degree of sanitation. Every store is directly in charge of a man who has had years of experience and training in this line of work. The stores are liberally patronized by employees, and it is possible to secure in them a much better quality of food at a cost considerably less than the prevailing price of foodstuffs.

**RESTAURANTS.**—At practically all terminal points throughout the city of New York, restaurants are maintained for the benefit of employees. These restaurants are kept open throughout the twenty-four hours, where cooked food is sold at actual cost. Many of the employees, more especially those not married, avail themselves of these facilities throughout the entire twenty-four-hour period, where a full meal can be had at nominal cost. In these restaurants upward of 1,000,000 meals are served annually to employees.

**RECREATION ROOMS.**—At practically all terminal points the company maintains recreation rooms for the use of employees. These rooms are equipped with libraries, reading rooms, pool rooms, shower baths, and other comforts of club life. The books for the libraries in these recreation rooms are furnished by the New York City Traveling Library, thus insuring to the employees the best and latest in literature. The books are also available to members of the families of employees for a limited period without cost, the general scheme of the circulating feature of the library being conducted on practically the same basis as the public libraries. To stimulate interest, the company encourages during the winter months pool, billiard, chess, checker, and domino tournaments. At our Two Hundred and Forty-sixth street recreation room a concert or assembly hall has been built, seating 300 persons. Throughout the year various kinds of entertainments are given here—stereopticon exhibits, amateur operas, band concerts, lectures, etc.

**NOON-DAY SHOP MEETINGS.**—In cooperation with the company officials, since the spring of 1906 the West Side Young Men's Christian Association has been developing what is known as "noon-day meetings," held in shops and recreation rooms of the Interborough. The purpose of these meetings is to bring to the men in the short noon-hour period recreation, education, and inspiration. In order to accomplish this threefold purpose, excellent musicians, vocal and instrumental, are engaged to give a first-class musical program of three or four short numbers. Between the musical numbers a speaker addresses the men and in clear, concise phrases presents a life message. If he is a doctor, the message may be in the line of instruction of ways in which to avoid disease or to increase physical efficiency. If he is a minister, the message may be to inspire the men to a cleaner moral life and to a keener sense of responsibility for their fellows.

Narrow sectarian or denominational discussions are avoided, and the great universal principles of righteousness and justice are emphasized. Many an effective appeal to the higher senses of the man is made through the simple telling of a story. Birthdays of men prominent in the history of our country are marked by presentations of the lives and characters of these men. A considerable number of business men and lawyers help in the speaking at these noon meetings. One man, a wholesale grocer, comes one noon each week from Jersey in order to give one group of shopmen his conception of true living. The sub-



ject of safety has been presented at the various meetings by a representative of the American Museum of Safety. Plain talks on personal efficiency have been given by a representative of the Y. M. C. A. efficiency course.

No door of opportunity has been left unopened through which it has been possible to bring to the employee of the Interborough the practical advantages which the Young Men's Christian Association affords. Each year an open invitation is given for any man having a personal problem which he would like to talk over with an older business or professional man to come to the Y. M. C. A. for this interview. Cards are printed explaining this opportunity, and any man can make an appointment by simply signing his name and address and sending his card to the association office. In this way many men have been helped in practical ways, men whom without the private interview plan it would have been impossible to help. Each year a large entertainment has been held at the Y. M. C. A. building, to which all those interested in the shop meetings have been invited to bring their families. The program at these annual entertainments has been furnished partly by the Young Men's Christian Association and partly by the men of the various shops. The subway band held a leading place on the program of one recent entertainment.

The meeting in each shop and recreation room is in active charge of a committee composed of Interborough employees, who are interested in its success. These committees advise with the Y. M. C. A. director regarding music requested and subjects for speeches. Twice each year these committees meet with the director at the West Side Y. M. C. A. in order to discuss plans for the improvement of the meetings. For the building of character and men, these noon meetings are expressly designed.

**SUBWAY BAND.**—The company has a band of 100 employees known as the subway band, properly uniformed and equipped, which plays at various special and other functions of the employees, and has grown into one of the best musical organizations of the city of New York. While its uses are generally restricted to company affairs, it occasionally participates in patriotic and civic functions, frequently furnishing the musical service at Sunday night church concerts, on which occasions employees generally attend, and for the last three years has acted as escort to the Grand Army to and from their annual church service. The general object sought in the formation of the band was to place at the disposal of such of our employees as are musically inclined means for further study and practice of music, as well as to inspire loyalty and patriotism. Every man connected with the band is taught discipline, and every member is on his honor to carry this discipline study into his every-day life and work, to be courteous to passengers, and to preach the subject of good service to the traveling public and to every other subway employee for whose general benefit the band was created. The company has provided the band with meeting and rehearsal rooms, and, as those rooms are located at one of the important terminals of the company, employees are in the habit of gathering there on rehearsal nights to enjoy the music.

**ATHLETICS, OUTINGS, AND OTHER SOCIAL AFFAIRS.**—The company has devoted some of its real estate holdings to playgrounds for employees for baseball, football, tennis, etc., with a grandstand for the use of themselves and friends. These grounds are always in great demand during the different seasons. The company has been instrumental in forming a baseball league, with clubs representing the various departments of the service, and between

which there is the keenest rivalry. The officials of the company personally contribute each year a league championship baseball pennant, which is awarded the winning club, and gold medals, suitably inscribed, for the individuals of the champion team, giving at the end of the season a dinner to members of the entire league.

During the different seasons officials of the company encourage employees to arrange picnics, balls, clam bakes, minstrel shows, and other functions of a social nature. During the winter months each department holds its annual ball, as well as its annual dinner, in which affairs all officers of the company participate financially and socially. During the summer months various departments give outings and clam bakes, usually chartering the subway band and a boat for a sail to some of the various nearby picnic resorts.

The object of these social gatherings is to cultivate a closer social relationship and a greater feeling of community of interest between the employees themselves, as well as between officials and employees, to the end that all may become impressed with the idea that officials and employees have but one interest at stake, and both are striving for one common purpose—namely, the general welfare of all.

**INTERBOROUGH BULLETIN.**—The company publishes monthly and circulates among its employees an illustrated newspaper containing articles of personal and educational interest, and its columns are at all times open to the expressions of employees. In addition to articles of a technical nature relating to traction operation, and articles of a personal nature relating to employees and their families, the paper is also used as a medium for keeping employees informed on rules and regulations of the company and its general operating policy.

**FREE TRANSPORTATION.**—Effective December 1, 1913, the company presented to the wife of every employee who had been in the service one month or more a pass good for free transportation over the system in which the husband is employed.

**SUMMER UNIFORMS.**—The company has adopted the policy of furnishing free to all employees of the transportation department of the subway white duck uniforms, which are laundered and maintained without cost to the employees, thereby promoting the comfort of those whose employment keeps them on the underground system during the summer months.

**CHRISTMAS REMEMBRANCES.**—In recognition of the co-operation of employees, the directors of the company the past two years set aside a sum of money from which each employee receiving \$115 per month or less, and who has been in the service for one year or more, shall receive a Christmas present of \$5 in gold.

#### Prudential Life Insurance Company

BY CHARLES W. CRANKSHAW, M. D.,

Physician in charge of infirmary, Prudential Insurance Company, Newark, N. J.

The practice of hygiene and sanitation in business has increased considerably during the past few years, and the solution of hygiene problems in the laboratory has contributed in no little way to the means now used for the protection of those employed in or about the shop, factory, or office of great or small industrial establishments.

The social service worker is helping to solve some of these problems, and greater service can be rendered if a visiting nurse is employed to visit employees at their homes or in the hospital when they are sick or injured. The social service department of the Massachusetts Gen-

eral Hospital serves as a striking example of what we mean by real social service work, and is rendering excellent service, counting mightily for efficiency. In this way prevention and not cure plays the title role.

Preventive medicine is of great value commercially, and this is true conservation of time, money, and physical and mental energy. In industry all education must be turned to practical account. Many of the large and small industrial establishments look after the health and welfare of their employees. As to hygiene provisions of a great life insurance company like the Prudential, where about 4,000 employees at the home office are busily engaged in the conduct of the business, it is quite essential, in order to get the highest efficiency, that everything possible be done to safeguard the health and conserve the lives of those employed in the four large buildings, comprising the group known as the Prudential home office.

The greatest attention, then, should be given to the care and welfare of the most wonderful mechanism ever created—the human body. Some of us try to exercise great care as to the hygiene of our bodies, while others, who think they know better, persist in doing things to the detriment of the mechanism, and it is little wonder that their physical and mental powers become impaired and inefficient long before they should. Nature is patient and long suffering, but she requires a final adjustment of her account.

To begin with, all applicants for clerical positions with the Prudential are required to take mental tests and are subjected to a medical examination. Applicants for positions in the printing and bindery departments, culinary department, engine room, electricians, machinists, elevator men, porters, etc., are required to pass a medical examination before entering the service. In the culinary department, in addition to the examination on entering the service, an examination is made every three months of all those handling the food, dishes, or linen. This includes everybody from the steward and chef to the dishwashers. We pay special attention to diseases of the lungs, heart, throat, skin, etc.

We will refer to the problems of hygiene, safety, and welfare of the employees, worked out and put in operation by the Prudential at the home office, under the following headings:

Ventilation.	Safeguarding machinery.
Lighting.	First aid hospital or infirmary work.
Heating.	Graduate nurses for the infirmary and visiting service.
Drinking water.	Cases referred to rest and recreation room for egg and milk.
Dust removal.	Disability, service retirement, and sanatorium allowances.
Flies, etc.	Office hours, vacation, and special days.
Rubbish disposal.	Rest and recreation.
Washing facilities and toilet arrangements.	Concerts, etc.
Soap.	Field and athletic games.
Towels.	
Lockers.	
Drying room for clothing.	
Umbrellas supplied.	
Telephone exchange.	
Culinary department.	
Kitchen.	
Serving room.	
Dishwashing room.	
Dining rooms.	
Garbage.	

**VENTILATION.**—Great attention is being given to the matter of ventilation, and in some parts of the building

the air is washed and pumped into the rooms; others have a ventilator connected with each window that can be opened and shut at will, and these are connected with the radiator system, so that in winter the air can be warmed as it comes into the room. Electric fans are installed throughout the buildings, and these, in connection with ventilating apparatus installed and the fact that the buildings are well supplied with windows, insure to the employees an abundant supply of fresh air. The air in each department is sure to be swept clean at intervals throughout the day, as it is the duty of several men to continually go about opening and closing the windows of the different departments for an interval of a few minutes. There may be isolated parts of the building where it may be necessary to pump in air, and in one or two such places a ventilating system has been installed at some expense, but, when it comes down strictly to good ventilation, it is my opinion that an abundant supply from the outside can be secured through the opened windows, as the old-fashioned idea of opening the windows cannot be excelled by any system of washed air, and afterwards



Fig. 1. Prudential Life Insurance Company, New York. Reception room of infirmary.

pumping it into certain rooms or departments, unless such rooms are some distance from outside walls. In our machine shop and one or two parts of the building, where it is impossible to have a direct connection with the outside air, machines have been installed to pump in fresh air, thus insuring the workmen an abundant supply. As I said before, the problem of ventilation is continually being studied, and, wherever the system can be improved, this is being done. From our present knowledge we know room temperature should be kept as near 68° as possible and then the air to be kept in motion.

**LIGHTING.**—The buildings are all well equipped with windows, and there are very few parts of the buildings in which it is necessary for artificial light to be used throughout the day. Proper window shades are hung to each window, so that the light can be properly adjusted to the degree of sunlight outside. In case artificial light has to be used, each desk is properly provided with an electric light, which is held up from an arm which can be swung to the right or left according to the position of the one sitting at the desk. This light can be lowered or raised, as the case may be, and the electric bulb is properly screened with a suitable green shade. In addition, the large blotters which are placed on each desk are of a green color, and these serve to rest the eye to a great ex-



tent. The indirect lighting system is being gradually installed throughout the buildings, and especial attention is given to the lighting of the filing department, vaults, etc.

**HEATING.**—The buildings throughout are heated with steam, and some of the rooms have automatic adjusters to regulate the temperature.

**DRINKING WATER.**—One of the most important things for the employer to consider is that of the drinking water supply, and, as we found from the reports received from the city laboratory that it was not safe to use the water from our driven wells for drinking purposes, this supply has not been used except for mechanical and toilet purposes. We use the water which comes from the city mains. This is tested frequently by the city bacteriologist, and, as we are constantly in touch with the board of health chemist or city bacteriologist, we are assured that the water used for drinking is safe. In fact, our bacteria content is lower than the supply direct from the city mains for the reason that we have a filtering plant, and the water passes through the filters and then through a cooling process before it enters the drinking fountains, which are installed throughout the buildings. A recent laboratory report

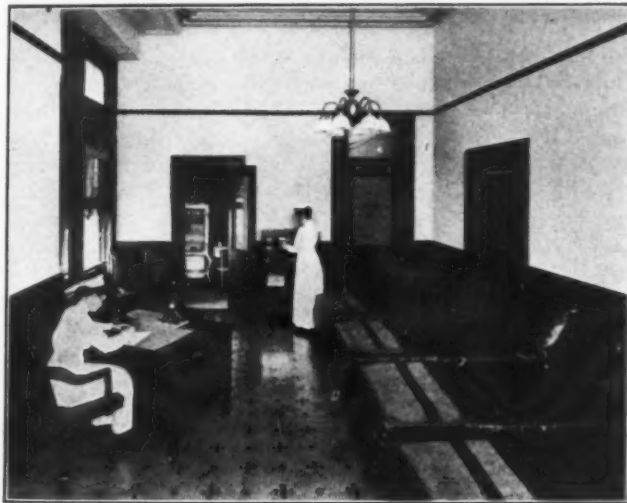


Fig. 2. Prudential Life Insurance Company, New York. Rest room of infirmary.

showed 25 bacteria per cubic centimeter before filtering and 10 bacteria per cubic centimeter after passing through our filters. Some of the samples after filtering have been sterile. We have never had colon bacilli in any of the samples. The filters are used and cleansed alternately. High-pressure steam is used for cleansing when necessary. Each employee has his own drinking glass, and consequently the chances of infection with any contagious disease by means of the secretions of the mouth or throat of others is very small. Water is so necessary for the various activities of the organs of the body, aiding secretions and excretions, food absorption and carrying away waste products, regulating body temperature, etc., that to encourage the drinking of sufficient water to help these various functions of the body, it is quite necessary that we know the quality of the water supply, and can assure the employee that it may be used as often as is necessary for drinking purposes, with no fear of infection. It is a comfort to know that, as far as bacteria content or colon bacilli are concerned, the water is perfectly safe. In this way one can readily see that fatigue poisons are diminished, and we attempt to prevent diseases that may be caused by impure water or the use of the common drinking cup. It is easy to understand that efficiency is increased

where wholesome drinking water is supplied, and without much study an economist can see the financial value of this side of the question.

**REMOVAL OF DUST.**—In regard to the removal of dust, absolutely no cleaning is done during office hours, and, as the vacuum service is installed throughout the buildings, the dust from the floors and rugs which is taken up in this manner is all centralized in one container in the basement of the building. A movable cleaner of this sort is now used for books, paper files, etc. The rubber coverings which are used in many of the corridors and aiseways for deadening the sound, and thus relieving unnecessary noise of those having to walk in, through, or to a department, have a sweeping compound distributed over their surface before they are swept. This is used on parts of the floor also. The use of the common duster is discouraged as far as possible, and this is used only where it is impossible to use other means of cleaning which would be practicable. When such dusting of necessity has to be done, the windows are thrown wide open and the electric fans started; no persons but the cleaners are about, and their exposure is slight, as the dust is quickly carried out the windows.

**FLIES AND INSECTS.**—As to flies and insects of any sort, we are especially interested in keeping these out of the infirmary and culinary departments, and by external vigilance they are kept down in all parts of the buildings by keeping out rubbish and dirt. In the infirmary the screens are kept on the windows throughout the year, and in the culinary department from April to December.

**RUBBISH DISPOSAL.**—Surgical dressings, wooden tongue depressors which have been used, and other material of like nature from the infirmary, are all subjected to incineration. The basements of the buildings are kept entirely free from all rubbish, which is carted away each day, and the walls are thoroughly whitewashed throughout the corridors and rooms in the basement of the buildings. Some of the basement corridors are painted and the floors are concrete. Notices are posted forbidding spitting.

**LAVATORIES.**—As to washing facilities and toilet arrangements, all the washrooms and toilets have marble floors and part of the side walls are marble. These are subjected to a thorough cleansing every day, and at least once a week to a thorough scrubbing with an antiseptic solution containing soap. As we do not advise the use of water in the toilet rooms for drinking purposes, because this water comes from our driven wells, proper notices to this effect are posted, and also notices with reference to the continual flushing of the toilets. Once a week disinfectant is used in each toilet basin throughout the buildings. Soap is provided for use in each toilet room. In some of the rooms liquid soap is used from a container. The roller towel has been replaced with individual towels of linen or paper, according to the needs. Several years ago the company supplied an individual drinking cup to each employee, and as employees enter the service they are given a similar cup. Such provision lessens the chances of skin infection or infection by the secretions of the mouth, throat, or nose. A matron is constantly going about looking after sanitary matters in the women's toilets. These have been supplied with machines for sanitary needs. Many of the toilet rooms are provided with an electric fan.

**LOCKERS.**—Each employee is supplied with a suitable locker which will hold the necessary articles of overclothing, and they contain the proper arrangements for umbrellas, overshoes, etc. The lockers we are installing now are metal.

**DRYING ROOM FOR CLOTHING.**—A drying room for

clothes has been installed, so that on very inclement days the clerks need not run any risk of catching cold on account of getting wet. Rooms for rest will be at their disposal, and the clothes returned to them in a few minutes perfectly dry. If any condition is noted tending to impair their health as the result of exposure in coming to the office on such days, the clerk or employee is sent home at once.

**UMBRELLAS.**—Umbrellas are supplied to the female clerks, if they apply for them, on rainy days.

**TELEPHONE EXCHANGE.**—The young ladies who do this work have, in addition to their noon lunch hour, an additional twenty minutes' rest period both in the forenoon and afternoon. Their surroundings and comfort are being constantly looked after, as their work is of such an exacting nature and requires the eye and ear to be constantly on the alert.

**CULINARY DEPARTMENT.**—In the culinary department, which includes the kitchen, serving room, dishwashing room, and dining rooms, great care has been taken to in-



Fig. 3. Prudential Life Insurance Company, New York. Physician's office in infirmary.

stall the latest improved apparatus for washing all the dishes and kitchen utensils. The floors and walls are kept scrupulously clean. All dusting necessary is done with moist cloths, and the table linen receives the utmost care and attention. The refrigerators are cleaned several times daily, and kept scrupulously clean at all times. The windows of the culinary department and dining rooms are all screened. In one dining room more than 1,200 employees can lunch at one sitting. The garbage from the kitchen and dining rooms is disposed of promptly every day. It is not subjected to incineration, but is carted away daily, the cans properly cleaned as soon as they are emptied and afterward subjected to a high pressure of steam.

**MILK AND FOOD SUPPLY.**—The milk and food supplied to the employees is a matter which receives great attention. The milk is received from a dairy which has a re-

liable reputation for having the latest devices for cleansing and pasteurizing. This milk is examined bacteriologically at intervals in one of the largest scientific laboratories in New York city, and I endeavor to make frequent inspections of this milk, which is classed as grade A pasteurized. We are assured that all of the cows are tuberculin tested, and we feel perfectly safe that no disease can result from this milk. The meats, poultry, and all food supplies to be served in the dining rooms are selected with great care and put in proper refrigerators as soon as received. This is quite necessary when you think of the number of people served in the dining rooms daily.

**SAFEGUARDS, MACHINERY, ETC.**—In the engine room, printing and bindery departments, and every place where machinery, electrical devices, etc., of any sort are used, they are all properly safeguarded. Either the protectors have been on the devices when purchased or attached to certain parts of the machinery after they have been installed. In this way accidents have been reduced to a minimum. The gates of all the elevators have proper safeguards and devices for the levers which open and close the doors. For absolute safety, no elevator man is allowed to leave his car during the time he is on duty, except by proper arrangement with the starter. The door of the car is not allowed to be opened until the car is brought to a full stop, and the car is not allowed to start until the door is closed. The elevators have electric appliances which regulate the movements of the car, so that they cannot be started until the doors are closed. The window washers are all supplied with safety belts, and under no consideration are they allowed to wash or clean windows, etc., without using these appliances. The fire captain maintains fire drills, and the necessary appliances in case of fire are placed throughout the buildings. Through the real estate department, efficiency committee, etc., problems along these lines which come up from time to time are given thought, study, and consideration, and our records show that the number of possible accidents have thereby been reduced.

**INFIRMARY WORK.**—All cases of sickness or accident are sent to the infirmary immediately. In order to facilitate this work, the company has recently set aside more room, and we now have one room for an infirmary and rest room for female employees, another for male employees, and another room which is used entirely for first aid, the consultation and examination of employees, and disability cases. Another room is used for the doctor's office, where the stenographer keeps disability and office records. The infirmary staff now consists of a physician and four graduate registered nurses. One of these nurses has been on duty a greater part of the time as a visiting nurse. In case of a very severe injury we arrange to have such cases taken immediately to the hospital to which the one injured may desire to go. In cases of sickness, if the ailment is such that there is extreme suffering and it is plainly seen that the patient is not going to get better speedily, he is sent to his home, or, if he desires, arrangements are made to take him to the hospital. Any case which has not recovered sufficiently to go home unaided is accompanied by some one from the office, and, if necessary, a private auto conveyance is arranged for, and in extreme necessity we have arranged that a private autoambulance is at his disposal and can be dispatched at short notice. Every attention, as far as possible, is given to the slightest detail for the comfort of those who are sick or sustain an injury, and the fact that their welfare is looked after so carefully along this line is greatly appreciated. Occasionally cases come before us where, for some reason, they are not able to assimilate their food, and other cases, which have com-



pletely convalesced after surgical operation or serious illness in their homes or at the hospital, are strong enough and desirous of resuming duty, but have slight pallor. If they so desire, it is arranged that, on the order of the physician or nurse, they may go to the rest room at 10:30 in the forenoon and 2:30 in the afternoon for egg and milk, or milk alone, as they desire. One of the nurses is detailed to give personal attention to these cases daily, and by frequent observations she can note the weight, general appearance, etc. The results in some of these cases are extremely gratifying. Some have gained as much as ten and twelve pounds in weight and the quality of their blood is better. There is the joy of feeling well, not being fatigued nearly so easily, and their efficiency has been greatly increased thereby. In addition to the extra nourishment afforded, there is, of course, the additional rest, and the fatigue toxins do not get a chance to diminish the vitality of such cases. We can thus see that the infirmary is a clearing house for practically all cases of illness or injury, and acts in the same capacity in reference to quarantinable diseases. Since the disability plan has been in operation, such cases naturally are taken care of by this department. All employees in the office who have any infectious or contagious diseases at home are to report same to the heads of their department immediately, and they are in turn referred to the infirmary, so that we can determine whether they should absent themselves from the office. In this way we are doing much to conserve the health and lives of those who are conducting the business at the home office. The visiting nurse carries good cheer and a kind word to those who are absent on account of disability. She is able to advise in many cases what is the best course of procedure so that they will soon be restored to health, and in addition she is encouraged by the physician in charge to keep him in touch with any complications or data which will aid him in giving proper consideration to any given case. In our infirmary and disability work we have the most cordial relations with the hospitals and sanatoriums, and also with the attending physicians, specialists, and dentists. In many cases the family physician asks us to cooperate with him in order to effect a cure. Where we find cases of incipient tuberculosis of the lungs, they are referred immediately to their family physician, and in return we are asked to cooperate in any sanatorium or other treatment which they decide on. Our experience in handling this class of cases has been very satisfactory, and today a number of cases which at one time were those of open or active tuberculosis have had the disease arrested and been restored to health, so that they could safely return to duty.

The following figures will give some idea of the work done during the last four years, showing the actual number of cases. The figures are considerably larger when the number of visits and treatments subsequently made are included:

	1912	1913	1914	1915
Sickness cases .....	2,984	3,946	4,344	4,396
Accidents on duty .....	432	291	280	275
Accidents off duty .....	163	334	332	426
Total cases treated.....	3,579	4,571	4,956	5,097
Cases referred to visiting nurse....	390	844	858	1,087
Visits made by visiting nurse.....	575	982	1,017	1,306

The grand total of visits and treatments for 1915 was 10,627.

**DISABILITY, SERVICE RETIREMENT, AND SANATORIUM ALLOWANCES.**—In case employees are disabled, they are paid according to their length of service. No contribution is required from them, but their regular compensation is continued as usual on account of disability, according to the plan which was announced by President Dryden in December, 1913. As to service retirement, this is also ar-

anged for according to age and length of service. Pamphlets have been printed giving the entire plan of the disability, service retirement, and sanatorium allowances in detail. The following data will give some idea as to the methods and results as worked out for the, approximately, 4,000 home office and 13,000 industrial field employees:

#### ALLOWANCES DURING DISABILITY

##### Home Office Employees

For absences on account of disability not exceeding twelve days in the year, employees receive their regular compensation. For absences of six consecutive days or over, they receive the following allowances:

Length of service in complete years	Regular compensation paid	Disability allowance paid
1 year.....	2 weeks	2 months
2 years.....	3 weeks	3 months
3 years.....	4 weeks	4 months
4 years.....	5 weeks	5 months
5 years.....	6 weeks	7 months
10 years.....	11 weeks	18 months
15 years.....	16 weeks	29 months
20 years.....	21 weeks	40 months
25 years.....	26 weeks	50 months
30 years.....	26 weeks	56 months

The disability allowance is at the rate of 35 percent of the regular compensation, but never less than \$20 nor more than \$125 a month.

The company, in addition to the service disability allowance, will in its discretion, when desired, provide tuberculous employees who have been at least three years in the company's service, treatment at the nearest suitable sanatorium for a period not exceeding twenty-six weeks, and also pay traveling expenses to and from the sanatorium.

##### Industrial Field Employees

During the first four weeks of disability, employees who have served more than one year receive their regular compensation, after which they receive the allowances shown in the following schedule:

Length of service in complete years	Disability allowances paid	Length of service in complete years	Disability allowances paid
1 year.....	2 months	10 years.....	18 months
2 years.....	3 months	15 years.....	29 months
3 years.....	4 months	20 years.....	40 months
4 years.....	5 months	25 years.....	50 months
5 years.....	7 months	30 years.....	56 months

The rate of disability allowance is \$40 per month to agency organizers and assistant superintendents and \$30 to agents. Tuberculous employees who have been at least five years in the company's service may, if they so prefer and with the company's approval, receive, in place of the service disability allowance, qualified treatment in the nearest suitable sanatorium.

In the case of married tuberculous employees receiving sanatorium treatment, the company, in addition to the payment of the cost thereof, may pay to the wife or dependent children of the same, or both, such portion of the service disability allowances otherwise payable to the employee as in the judgment of the company would be justified by the special circumstances of the case.

#### SERVICE RETIREMENT ALLOWANCE

After twenty-five years' service, employees of the home office and industrial field forces may retire on arriving at the age of 65 (age 60 for females). The retirement allowance is at the rate of 1 percent for each year of service rendered, computed on the average annual earnings during the last ten years of service. In no case, however, is the retirement allowance less than \$30 nor more than \$100 per month. The amount of retirement allowance paid is shown by the following schedule:

## MONTHLY RETIREMENT ALLOWANCES

ON THE BASIS OF AVERAGE ANNUAL EARNINGS FOR THE LAST TEN YEARS OF SERVICE

Length of service	\$600	\$1,000	\$1,500	\$2,000	\$2,500
25 years	\$30.00	\$30.00	\$31.25	\$41.67	\$ 52.08
30 years	30.00	30.00	37.50	50.00	62.50
35 years	30.00	30.00	43.75	58.33	72.92
40 years	30.00	33.33	50.00	66.67	83.33
45 years	30.00	37.50	56.25	75.00	93.75
50 years	30.00	41.67	62.50	83.33	100.00

**INSURANCE ON THE LIVES OF FIELD AND HOME OFFICE EMPLOYEES.**—On July 17, 1916, President Dryden announced to the industrial field staff and the home office force that the company would insure the lives of its employees without any cost to them, whether on the active or on the retired list, for the amounts indicated in the following schedule, and that on the death of any such employee while in the service of the company there will be paid, in one or more installments, to the person or persons appearing to the company to be equitably entitled thereto, the sum so insured:

When the length of service of such employee has been less than one year	\$ 500
When the length of service has been one year, but less than five years	1,000
When the length of service has been five years, but less than ten years	1,250
When the length of service has been ten years, but less than fifteen years	1,500
When the length of service has been fifteen years, but less than twenty years	1,750
When the length of service has been twenty years and over	2,000

Except in the cases of employees on the retired list, the foregoing shall apply only to persons whose whole time is given to the service of the company.

The plan announced above should not be regarded as taking the place of any personal insurance which the employees of the company may wish to carry, and does not apply to the officers or directors of the company.

**OFFICE HOURS AND VACATIONS.**—The office hours during each working day are from 8:30 to 12 and 1 to 4. Saturday is a half holiday during the entire year. Vacations are arranged for according to the length of service, and only in very few instances—those of beginners—are vacations less than two weeks. Some of the older employees enjoy as much as four weeks. In addition, a special day is granted every thirteen weeks for promptness, punctuality, and special care and attention to their duties.

**REST AND RECREATION.**—As to rest and recreation, the general welfare of the employees is being considered, and, in addition to those who have the privilege of going to the rest or recreation rooms, it is desired as far as possible that all employees should absent themselves from their desks or departments during the entire lunch hour, from 12 to 1, so that they have sufficient time for luncheon and a short walk in the fresh air and sunshine, or for any other diversion which may be of benefit to them. Each working day the clerks enjoy a recess at 10:30 a. m. and 2:30 p. m., so that no period during the day is longer than one and one-half hours, excepting the first period, from 8:30 to 10:30 a. m. During the past year a recreation and game room has been fitted up for and is thoroughly enjoyed by the men. The women's recreation room is well equipped, and the many delightful appointments make the room very popular. One-half of this room, which is 144 feet long, is reserved for dancing. In the balance of the space calisthenics, games, etc., may be indulged in. Rest and recreation are very important, as they tend greatly to reduce fatigue toxins and efficiency is thereby increased.

**CONCERTS, ETC.**—During the noon hour concerts are arranged for in the assembly hall on inclement days, and there are regular features several times each week, movies, etc. The company usually arranges for a series of

entertainments during the fall and winter months. These are given on Fridays at 4:15 p. m., according to schedule.

**FIELD AND ATHLETIC GAMES.**—The company's athletic association has charge of all the athletic and recreative sports, and, in addition to tournaments, cross-country runs, athletic meets, and games which are held at different times during the year, has at least once a year a field day, and the entire office force is given the privilege of enjoying this outing. This association has over 1,300 active members, and they are doing a great deal to help themselves along the lines of hygiene and health, and are receiving the active cooperation of the president and other officers of the company.

I have attempted in a very hurried manner to give you an outline of some of the things which the officers of the company have worked out for the general well-being and physical welfare of the employees. In view of the fact that all applicants for positions are now subject to a medical examination, we are able to safeguard the health of the employees to begin with, and, as they are taught from time to time both by personal contact in the infirmary, by health articles which are printed in pamphlet form and by other matters of hygiene interest which appear in the *Home Office News*, the young men and women are beginning to learn more about the laws to be observed as to the care of their bodies and what it means to have a sound mind in a sound body. It has been said that "life is not only to live, but to be well." How true this is and what joy there is in work, mental or physical, when we feel strong and well. Preventive medicine is, therefore, true conservation, and this adds to the efficiency of those who are actively engaged in any kind of industry or line of business.

## Pierce-Arrow Motor Car Company, Buffalo, N. Y.

The Pierce-Arrow Motor Car Company has been conducting "welfare work" since moving into its present plant in 1906, and the spirit and scope of the plan has grown with the years. The factory buildings, now comprising some 1,219,094 square feet of floor space, are practical examples of what may be accomplished in providing the maximum of light, fresh air, and comfortable temperature in all seasons to the end that employees may perform their work in pleasant, sanitary, and healthful environment. The buildings are of reinforced concrete construction, and the entire outside walls of the four-story buildings, aside from the columns and a small area beneath the sills, are made up of windows. This, coupled with the fact that none of these buildings is over 62 feet wide and that there is an open court almost as wide between buildings, insures ample light during the daytime, and satisfactory artificial light is, of course, provided for use during the short winter days and at night.

The plant engineers have given considerable attention to the heating and ventilating problems. The old buildings are heated by forced hot air circulation, with underground ducts leading to the different floors to supply them with hot air, and the new buildings are heated by direct radiation, using forced hot water, which is heated by exhaust steam from the power house.

An interesting sight is the serving of over 900 men at one time in the large dining room. The meal is rightly termed "noon dinner" instead of "noon lunch," as it is the contention of the company that men who work hard need a good dinner at noon and not merely a light, cold lunch. The charge for the meal is 15 cents, but this does not cover the cost. The meal consists of soup, meat, potatoes, vari-



ous vegetables—such as rice, beans, or turnips—with bread and butter, and tea, coffee, or milk. In addition to one serving of meat, a man may take as much as he wishes, so that no one need leave the table with a craving for further nourishment. The menu is changed every day.

There are thirty-nine tables, each seating twenty-five

contrivances are found here, and an expert chef supervises the preparation of all food. The club kitchen is entirely separate from that used for preparing the food for the large dining room. A completely equipped bakery supplies all bread, pies, and puddings.

A modern ice plant is provided for preserving meats and vegetables, and to supply water to the drinking fountains, of which there are a large number in the factory and office buildings. The water used in these fountains is filtered through an electric device, which purifies it and destroys all germs.

In the basement of the administration building is the laundry, where table linens, caps, aprons, coats, etc., used in the kitchens and dining rooms are washed and ironed. The towels used in the plant are also washed here. The illustration (Fig. 1) shows the arrangement of the laundry, and attention is directed to the provisions for the safe operation of the machinery. It will be noted that all shafts, belts, and pulleys are fully guarded. On the extractor, for instance, it is impossible to open the cover while the machine is in operation. The ironing machine is provided with a special mechanism to stop it instantly if necessary.

The illustration of the wash room (Fig. 2) shows the arrangement of individual wash bowls, and each bowl is provided with hot and cold water and individual cake of soap. Just before the noon and evening whistles thousands of towels are piled above the wash bowls, so that every worker may leave the factory as clean as when he entered.

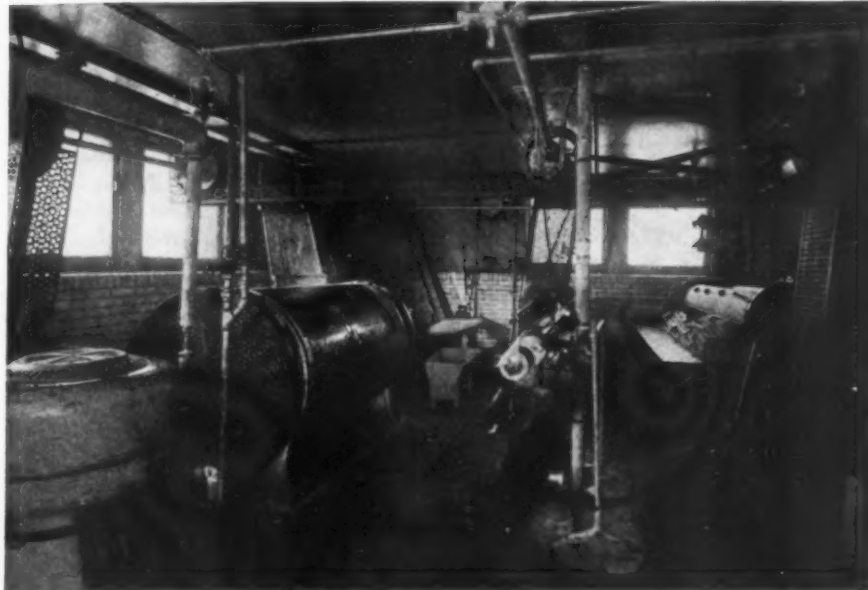


Fig. 1. Pierce-Arrow Motor Car Company, Buffalo. Laundry showing how shafts, belts, and pulleys are guarded.

men, and a waiter is provided for each table. These waiters are selected from young men in the shop departments, where their absence does not interfere with any process of manufacturing. They leave their work at 11:15, wash, and have their dinner at 11:30, which is furnished to them without charge. Just before 12:00 they place the food on the tables, and until 12:30 are occupied with serving the employees. They then have from 12:30 to 1:00 for their noon recess, returning to their work at 1:00. At the end of the dining room is a table reserved for those young ladies employed by the company who wish to eat there. There is also a small separate dining room provided for those who wish to bring their lunch, where coffee, tea or milk is served at cost.

In the center of the dining room is a grand piano, and each noon a pianist, selected from among the employees, adds to the pleasure of the noonday meal. Before each holiday there is a song festival, in which all employees participate, and it is inspiring to hear a thousand men join in Christmas carols and patriotic songs. That this form of entertainment appeals to the men has been proven by the formation of the Pierce-Arrow Glee Club. The administration building also contains what is known as the club dining room, where a somewhat better meal is served than in the large dining room, and the charge for dinner is 25 cents.

The mammoth kitchens compare favorably with those to be found in any first-class hotel. Modern devices for the sanitary handling of food and mechanical labor-saving



Fig. 2. Pierce-Arrow Motor Car Company, Buffalo. Individual wash bowls and lockers.

Each employee has at his disposal a full-length, sanitary steel locker, to which he holds the key, and a section of these may be seen at the farther end of the wash room. Ample space is provided in the basement of the administration building for employees' bicycles and motorcycles, and there are also places outside for parking employees' automobiles.

When the company officials noticed that the men congregated about the Benevolent Association store at noon, a piano was installed, and during the winter months talent from among the workers alternates in giving short entertainments during the noon recess. This gave rise to the idea of something more permanent and comprehensive,



Fig. 3. Pierce-Arrow Motor Car Company, Buffalo. Candy and cigar stand.

and the Pierce-Arrow Glee Club was formed, which a short time ago gave an elaborate entertainment and dance in one of the large convention halls in Buffalo.

The management has always encouraged the men to take advantage of the educational facilities offered by the city at the various night schools and those provided by the local Young Men's Christian Association and other such institutions. At different times the company has had representatives of these schools come to the plant and give talks to the men, describing to them the advantages to be gained by a better education. Bulletin boards about the plant carry literature describing in detail the courses available at these schools.

A branch of the Buffalo Public Library is located in the plant, which is open every noon, affording employees an opportunity of selecting from several hundred books on subjects applying directly to the work and others of general interest to the book lover. In case a man wishes a book which is not included in the plant assortment, he fills out a request form, and the next day will find the book awaiting his call.

Recently the company has established an apprentice system. This is restricted to a very small number, and is very similar to the usual apprenticeship courses. A young man entering this course goes from one department to another at regular intervals until he has completed the three-year course, the idea being not so much to fit him for any particular trade, as to enable him to take executive positions. The young men are generally selected on account of certain traits of character,

and are expected, without being asked, to take some course in the evening high school or local institution to help them in the theoretical knowledge that is necessary to make them proficient in the line of work for which they are fitting themselves.

The first aid and safety division is under the supervision of the employment department. This division employs a graduate physician and a practical nurse, and, in addition to the treatment of shop injuries, the men are welcome to use the services of this division for minor injuries received outside of the plant. The men have taken advantage of this privilege, and come to the first aid for medical consultation and advice, where practical, simple remedies are given without charge. Very often an employee has averted some serious illness by timely treatment, as men will consult the first aid in cases where they would not call at the office of an outside physician, thinking that they are hardly ill enough to go to the expense and trouble of such visit.

The first aid has recently given a thorough medical examination to each employee desiring it. The examination is not compulsory, except where a man is engaged in an occupation

where his health must be at the very best to perform the duties, such as heavy lifting, when it is necessary that a man be not ruptured and that he be otherwise in good physical condition. In the sand blast operation, in spite of the fact that our ventilation is the best that can be obtained, a man's lungs should be in perfect condition. It is interesting to note the result of these

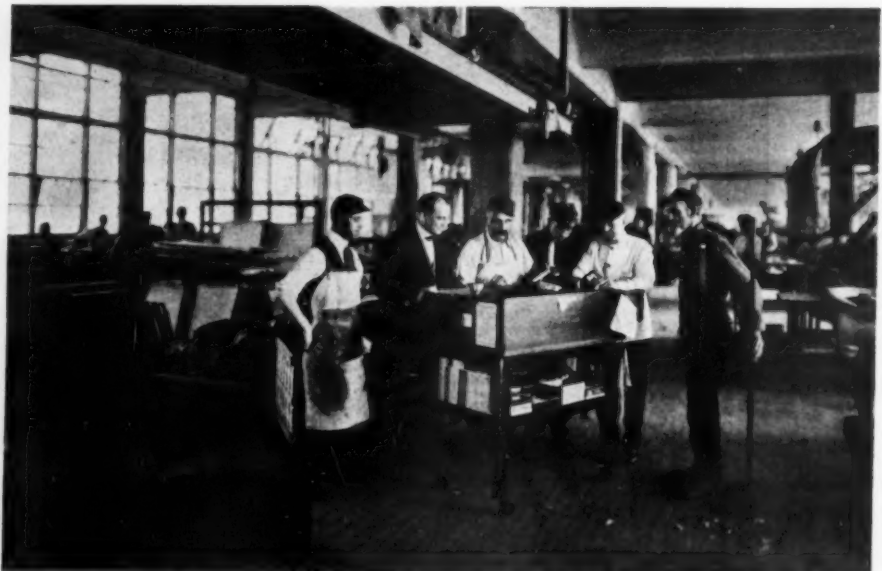


Fig. 4. Pierce-Arrow Motor Car Company, Buffalo. Carts for delivering candy, tobacco, etc., in the factory.

examinations, as in a number of cases conditions have been revealed which, if not attended to at once, would have seriously impaired a man's health, and in a few cases would have been the cause of death. Among several hundred that have been examined there has not yet been a case where an employee has lost his job because his health did



not warrant keeping him in the employ of the company, but there have been cases where it has been necessary to change an employee's position, as the state of his health would not permit him to continue the work he had been doing.

The safety division is in charge of a safety engineer, who devotes his entire time to inspection and safety work. He is chairman of the safety committee, which is composed of forty-eight foremen and fourteen workmen. Three new members are added each month to take the places of three retiring members. Each member has a certain part of the plant to cover for inspection, and he reports to the chairman whatever he may find unsafe, and the matter receives prompt attention. If for any reason it is not found advisable to act on a suggestion, the reasons are given to the committeeman, so that he may feel that some thought has been given his suggestion. Disputed points are discussed at the committee meetings, which are held semi-monthly. These meetings are of importance to the safety work, and are held on the company's time, so that the workmen do not suffer any loss. A man on the safety committee takes particular pride in seeing that all safety rules and regulations are carried out in his district, and this habit continues with him even after he has retired from the committee. Surprising are the valuable suggestions for safety that these men bring to the attention of the safety engineer—matters which he would not ordinarily observe.

The Employees' Benevolent Association, organized by the employees to provide a sick and death benefit to its members, has the full encouragement of the management. While the management does not directly contribute to this association, it in many ways materially fosters its advancement, and for several successive years the vice-president of the company has been unanimously elected president of the association. The dues are only 40 cents per month, which is not, of course, sufficient to pay the running expenses. The association pays \$6 per week for thirteen weeks to a member when sick and a death benefit of \$100, and maintains the services of a physician, who will attend cases of illness.

One of the sources of income for the association is the candy and cigar store in the basement (Fig. 3), and, in addition to this, three men with carts (Fig. 4) continually go about the plant during working hours supplying the men with candy, tobacco, cigars, etc. These carts are objects of considerable curiosity to the average visitor, but, when the nature of their convenience is explained, it is conceded that the spirit which this feature creates among the workmen is of mutual benefit to the employer and employee.

Besides the benevolent association there is a relief fund for those employees who have drawn the full amount to which they are entitled from the association and still need assistance, and for those who, on account of physical defects or old age, are not able to enter the association. This relief fund is maintained by the profits from the sale of tickets to nearby summer resorts, by library fines, the annual shop picnic, money collected from employees buying hard scrap wood from the body mill department, which the company donates, and from the sale of certain articles at the candy and cigar stand.

#### International Harvester Company, Chicago, Ill.

BY GEORGE A. RANNEY, Secretary and Treasurer International Harvester Company.

Our language lacks the easy word or phrase that will exactly fit the Harvester Company's theory and plan for efforts toward improving the condition of its employees. "Welfare work" is the generally accepted term in common

use; "industrial betterment" is, perhaps, more precise, but it is rather awkward. So "welfare work" it must be until the terminologists in this field of applied sociology give us something more acceptable.

We hold that any valid attempt at industrial betterment must provide reciprocity of benefits. If the betterment endeavor does not lead to benefit to the employer as well as the employee, then it not only lacks business justification, but is likely to become obnoxious to the employee as charity, faddishness, or, perhaps, meddling. If it brings no benefit to the employee as well as to the employer, it is mere selfishness.

Welfare work of any kind presupposes as a foundation good wages and good working conditions. Fair compensation is the primary obligation of the employer to the employee for service performed, and he is equally bound to see that the hours are reasonable and that the service is rendered in safe and sanitary surroundings. No sound plan of industrial betterment attempts substitution of any kind in these respects.

Careful adherence to this theory, one may think, has put and kept the Harvester Company's welfare activities on a plane of practical effectiveness; it probably helped us to earn an exceptional commendation. I refer to the bulletin of the United States Bureau of Labor Statistics, published May 15, 1913, which said: "Too often welfare work is whimsical, the outcome of the particular fad of the president of the company, emphasizing unimportant details and failing to see the significance of such work. This charge cannot be made against the International Harvester Company's welfare work."

For the first few years of the company's life these activities were carried on through the organizations of the numerous plants. Obvious defects in that system, and desire to standardize and unify all such efforts, brought us to full coordination and concentration in a new company department, with an advisory board, executive committee, and other officers headquartered in and operating from the general offices. Under this plan the work has developed consistently and with satisfactory results.

Briefly, and giving precedence to the factors that make for the employee's health, our efforts may be summarized thus:

**MEDICAL SERVICE.**—Directed and conducted by a company staff of fifteen physicians on full time, a number on partial time, and seven graduate nurses, with medical quarters at each plant; examination of all applicants for work to guard against infectious diseases and to insure reasonable physical efficiency; annual inspection of all employees; emergency attention in hospital rooms at all plants; dental department established at McCormick and ordered at Deering, with free examination, emergency work, and cleaning.

**HOSPITALS.**—Rooms equipped for emergency medical treatment maintained at all plants; new emergency hospital at the McCormick works in separate building just erected for the purpose; similar hospital building ordered at the Deering works.

**ANTITUBERCULOSIS CAMPAIGN.**—Directed by a staff consisting of a tuberculosis specialist, a specially qualified assistant, and a specially trained nurse, with the assistance of the general medical staff and visiting graduate nurses; annual examination of all employees in plants and in the general offices, with frequent reexamination of suspected cases; published instruction in prophylaxis through the company's house organ; treatment of all active cases (70 percent in the sanatorium), the company and the benefit association sharing the sanatorium expense with the em-

ployee, and the company, when necessary, aiding in care of the family to relieve the patient's mind.

**PREVENTION OF OCCUPATIONAL DISEASE.**—Regular and frequent medical inspection and constant supervision, with recommendations of changes; standard precautions against lead-poisoning; protection of paint shops; dust removal; exhaust system for all dusty jobs.

**SAFETY FIRST.**—Standard protective equipment on all machines; safety inspector in each plant; investigation of all accidents and recommendations of changes where advisable; publication of rules and instructions in ten languages; constant education of employees and efforts to secure their cooperation.

**SANITATION.**—Directed by medical staff; regular and frequent sanitary inspection of plants and offices; aisles and corridors kept clear; no dry sweeping; standard toilets, drinking fountains, wash sinks (running water only), shower baths (where needed), wash and toilet room floors, cuspidors, ventilated metal lockers; drinking water frequently analyzed, artesian wells being driven where local supply is unsatisfactory; special suction fan and exhaust ventilation where needed, with International Harvester Company special machinery to draw off twine mill dust; abundant natural light where possible, with International Harvester Company standard artificial lighting.

**HYGIENE.**—Rest rooms and matrons at all plants where women are employed; prohibition (in advance of statute) of night work by women; Saturday half-holiday throughout the year in all plants in North America and in the general offices.

**EMPLOYEES' MUTUAL BENEFIT ASSOCIATION.**—Supported partly by the company and partly by employees; managed by trustees, half chosen by the company and half by employees; sickness benefits, one-half wages for fifty-two weeks; death benefits, one year's wages; total benefits paid in seven years, \$1,750,000.

**PENSIONS.**—Paid out of a company appropriation of \$100,000 a year; rate, 1 percent of average annual earnings for last ten years of service for each year of active service, with minimum of \$21 and maximum of \$100 a month; board has discretionary power to continue pension to widow or orphan.

**THRIFT.**—After successful experimentation, beginning in 1909, with the assistance of employees toward stock-sharing, the company announced in December, 1915, a five-year plan, combining savings inducements, service bonuses, profit-sharing, and stock participation. Up to June 1, 1916, more than 20,000 employees had taken advantage of this plan, having subscribed for more than \$5,500,000 of profit-sharing certificates.

**RECREATION.**—Club houses at McCormick and Deering works, club rooms at other plants; bowling, pool and billiards, library, meeting rooms, and auditorium in club houses; foremen's clubs at the plants to promote sociability, etc.; annual works picnics.

It is a debatable question whether there are substantial reciprocal benefits in welfare activities directed to the recreational and special advantage of employees. Where the plant is located in a large city, with abundant opportunity ready at hand for the employees to provide their own amusements and recreations, and with many of them living at a considerable distance from their work, it is easy to understand why they should find comparatively little need for club houses, and should be only mildly interested in athletic associations, baseball leagues, or other company contributions on the recreational side. If the plant be isolated, or in a town relatively too small to furnish such opportunities, company activities of this kind might

be indicated as desirable. The annual plant picnic is, however, a pleasant and possibly beneficial incident of factory operation, affording the employees and their families opportunity for an outing and reunion under wholesome conditions.

It may now be recalled with a degree of amusement how, a good many years ago, in the early days of welfare work, one of the original companies promoted a rather ambitious musical effort in its twine mill. Somebody got the idea that it would be a good thing to get up a musical club among the young women in that department. The club was a great success. Many of our girls took to it eagerly; some of them soon developed voices that were worth while and a capacity for faithful study and practice. Then the idea broadened. It was decided to produce an opera, "The Pirates of Penzance." The girls in the cast and chorus were given an hour off twice a week for rehearsals. The little theater first engaged was so heavily oversubscribed that we rented another and much larger house on the West side and filled it for five performances, admission being free to employees and their families. The show, like the club, was a gratifying success.

But, after it was all over, most of the girls who had taken part could not see why the two hours off a week should be discontinued—they had got the habit. Some wanted to go on the stage professionally, and some, I believe, did. The upshot of this affair was that we lost practically all the forty or fifty young women who had been in the opera. This experiment could not have done the employees much good—all the company got out of it was some useful experience.

It is at least questionable whether the employer has any right to try to follow the employee home from the factory and intrude on his domestic and social life, nor should there be any need for it in a city of considerable size and decent government. The problems of housing and education belong properly to the state, and the employer, as I see the matter, is warranted in exerting himself only when necessary toward the state's performance of its functions.

There can be no question about the reciprocity of benefits in every item of welfare work that guards and promotes the health of the employee. Health is a *sine qua non* of industrial efficiency. The employer may logically and reasonably expect that the safeguards and adjuncts provided for the worker's physical well-being will be paid for in the worker's sustained and increased effectiveness.

As for systematic encouragement of thrift, that, too, has benefits working both ways. The saving man, careful of his money, is likely to be careful of himself in all respects; necessarily he will be more careful of company property and responsibilities. The employer of experience and discernment in welfare work will realize the futility of trying to use any thrift, profit-sharing, or stock-participation plan for his own ulterior purpose; yet he may properly expect that such endeavors, properly worked out, will tend to produce a closer community of interest in the business.

The Harvester Company finds reason for gratification and encouragement in the fact that the provisions of its voluntary plan of accident compensation are markedly similar to those of the Illinois statute subsequently enacted; in the fact that its antituberculosis campaign has brought the rate down to one-fourth of the general population ratio per 1,000; in its largely decreased figures of industrial accident and occupational disease; in the remarkable success of its new profit-sharing plan. It looks forward to even more fruitful endeavor in the future, be-



ing convinced that work of this kind is never completely done.

In all that the company has attempted and accomplished along these lines, it has proceeded, first of all, from a sense of responsibility to the men and women of its industrial family—from a desire to be genuinely and practically helpful to them and to the communities of which they are a part. It has been fortunate as to these things in the fact that its principal owners are people with a strong sense of individual responsibility and stewardship toward all their fellows—people who see in any work for humanity, inside or outside their business, a duty to perform and happiness to be achieved.

#### In the Coal Mines

For the past twenty years legislatures have been enacting laws to provide for the safety and physical welfare of coal miners, but almost without exception these laws have been preceded by voluntary action on the part of the leading coal mine operators looking to the physical,

rooms underground, and specify the details of such stations, but the operators themselves have realized in a large measure their responsibility for the physical, mental, and moral welfare of their employees, and have gone about the systematization of this welfare work in a way that promises well for the future.

The isolation of most coal mining communities has lent itself nicely to the purpose. Good streets have been made in the coal mining towns, fringed with ornamental and shade trees, flower gardens have been created in connection with village playgrounds, in some cases the operators have offered prizes annually for the prettiest gardens and the best kept lawns about the homes of miners, and in many places there has been a forester and florist employed for the purpose of helping to beautify the homes and surroundings. Athletic fields have been set apart and dancing pavilions have been built for the young people to enjoy themselves. In some mining villages club houses have been built, with reading rooms, billiard and pool rooms, bowling alleys, and the like.

At most mine exits, especially in the larger mining

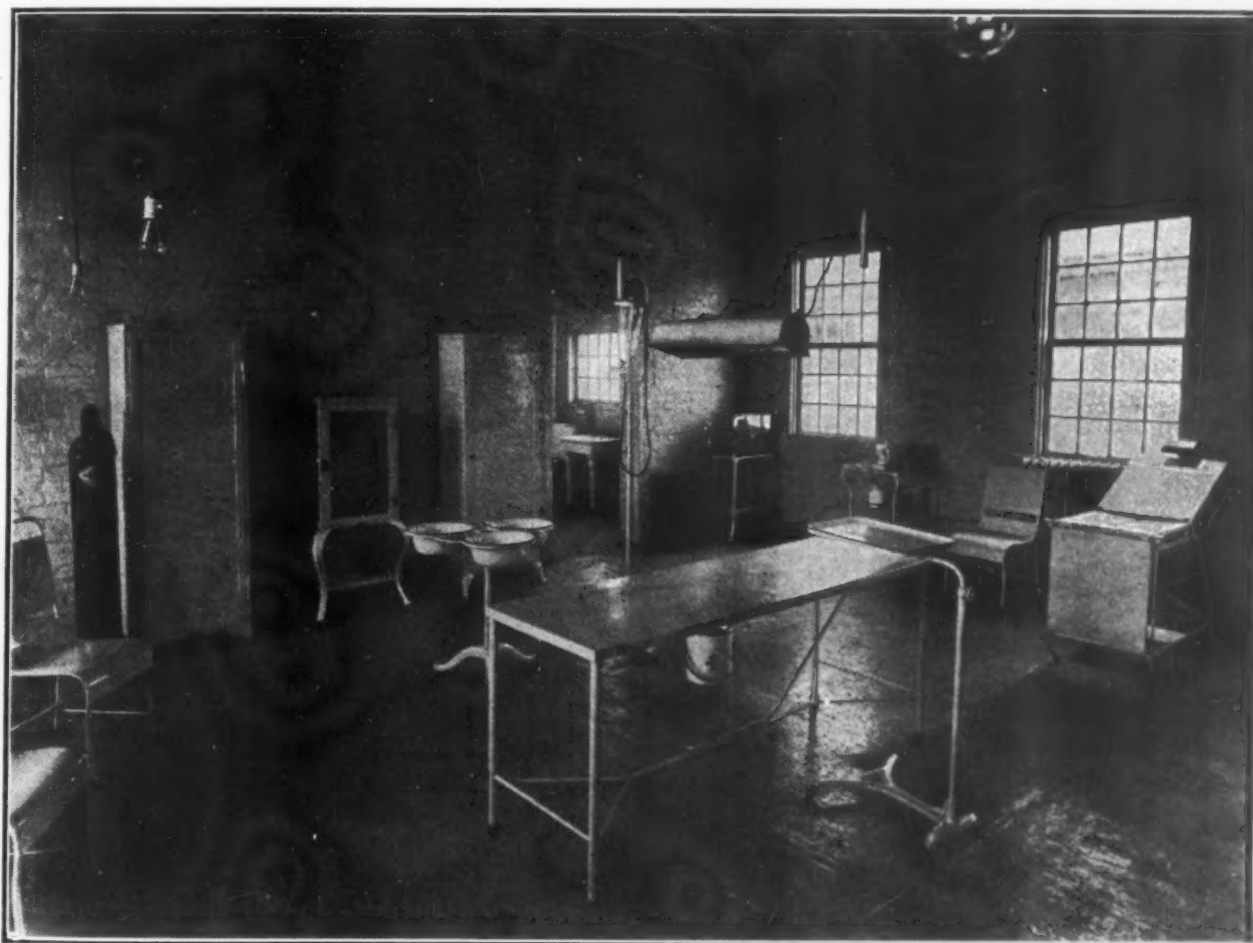


Fig. 1. Kingston Coal Company, Kingston, Pa. Operating room of No. 4 colliery.

mental, and moral betterment of their employees. While in some localities and under some operators conditions are still far from ideal, a majority of coal mine operators have bettered the condition of their employees, and a vast majority of the miners have now available living conditions fairly approximating those in other industries.

The state laws of Pennsylvania provide for hospitals above ground where more than ten miners are employed, they compel operators to maintain emergency hospital

communities, bath houses have been built, where shower and tub baths have been available for the miners as they quit their work with each changing shift, and it is almost the universal practice to use these baths before going to their homes.

Stimulated by the Carnegie Relief Fund of Pennsylvania and the systems of the Pittsburgh Coal Company, the H. C. Frick Coke Company, and the Philadelphia & Reading Coal and Iron Company, relief funds have been

created for the benefit of those hurt at work or who are ill. Connected with some mines, pension systems have been inaugurated and pension funds created, usually participated in by the miners to the extent of a small monthly amount, varying from 25 to 50 cents, but in many mines there is no contribution made by the employees to relief



Fig. 2. Kingston Coal Company, Kingston, Pa. Mine hospital of No. 4 Colliery.

funds, and, regardless of any legal liability, the operators are providing these funds out of their resources. In a number of mines the pension fund, also provided by the operators, is ample to care for those who have become incapacitated at their work, or who are too old to longer continue in the work, and recently a movement was begun to rearrange insurance rates for coal miners, predicated on the installation of more and better safety devices and



Fig. 3. Mineral Railroad and Mining Company, Shamokin, Pa. Mine hospital of Cameron colliery.

a more scientific control of the mines themselves, from the standpoint of safety.

As the great majority of coal miners are of foreign birth, many operators have conceived it necessary to provide schools, not only for the children, but for those who work in the mines, and these school systems are in many places on a par with metropolitan school systems.

Unfortunately many mines are still back in the dark ages, but these are fortunately paying the penalty by the refusal of the better class of miners to continue in their employment, so that self-preservation is rapidly driving mine operators everywhere to a better recognition of the humanitarian side of their business.

#### Armour & Co., Chicago, Ill.

Situated in the heart of the large Armour packing plant in Chicago, of easy access to all departments of the plant as well as to the general office, are a well-equipped emergency hospital and welfare station. Something of the scope and character of the work which the hospital and welfare station are called on to perform may be inferred from the statement that the Chicago plant employs 10,500 individuals, who represent subsidiary trades as widely divergent as hand engraving and blacksmithing, as well as representing many kinds of skilled and unskilled labor directly incident to the preparing of packing house products. A considerable number of the employees are foreign-born, and among these are several hundred young women and girls. Except in emergency cases, the more Americanized and better circumstanced employees naturally depend for the most part on outside sources for medical attention, though many, even of the office force, seek advice from the hospital doctors. Among the foreign-born, however, is the largest field calling for the services of the hospital and welfare department. The services extended to these do not stop with emergency cases, but reach out to a supervision of their general well-being.

The hospital and welfare station are located in apartments arranged in one of the plant buildings. The rooms are light and commodious, and finished in the regulation white enamel. They include reception rooms, consultation room, doctor's office, hospital ward, operating room, an x-ray laboratory, and a pathological laboratory. Separate waiting, rest, and consultation rooms are provided for women. With the clean white walls, simple decorations, and provisions for the quiet and comfort of the patients, one meets in these rooms the refined business-like atmosphere characteristic of a modern hospital. Three doctors and a staff of nurses, together with office attendants, are in charge. The place is well equipped with medical supplies and surgical apparatus. A private ambulance is maintained to transfer patients to a city hospital or to their homes when such course is necessary. The pathological laboratory, which is an important feature, has facilities for pursuing thorough research work in the diagnosing of cases which come under the attention of the hospital.

More interesting, however, than the equipment of the hospital and welfare station are the methods employed in conducting their work. These methods were adapted some time ago to meet the sociological conditions encountered in the plant. Previous to their adoption only the emergency hospital feature was maintained. This arrangement was found to be ineffective so far as the women employees were concerned. Many of these were unacquainted with the English language, and were superstitiously ignorant of American customs. They were afraid of a doctor, and fearful of reporting their illnesses lest they lose their jobs or suffer a reduction for time lost.



Accordingly this company introduced a welfare department, installed nurses, and reorganized the entire service so far as the women were concerned. The methods now in force might be called a paternal system—or maternal, if you choose—of looking after the physical well-being and, so far as possible, the social welfare of the women

without fostering the spirit of dependency among the recipients of favors. The girls and women are at all times urged, wherever they have resources for looking after themselves, to consult their own family physician, to see a dentist, or go to an optician. When they have not the necessary resources or initiative for doing these things—



Fig. 1. Armour & Co., Chicago. Reception room of the emergency hospital.

employees. The men, less fearful and diffident about applying to the doctors, avail themselves freely, by their own initiative, of the services offered. There is no passport or red tape involved in securing aid; the doors of the hospital and welfare department are wide open and all services are free. Anyone may apply for help, and those who ought to apply, but do not, are brought in.

The strictly emergency cases are for the most part minor ones, such as a cut or bruised finger, which needs medication to prevent infection. Aside from such cases, however, the doctors and nurses are always on a sharp lookout for symptoms of pathological conditions. The nurses make periodic visits among the women and keep in intimate touch with their physical conditions. Wherever symptoms of anemia, nervous or physical exhaustion, or any other disorder, are detected, a thorough examination and diagnosis are made, and steps taken at once in behalf of the patient. In every case of this kind the patient is given the necessary instruction as to diet, exercise, fresh air, etc., and treated, or advised to consult the family physician, or placed in a hospital or sanatorium, according as the case may require.

Among the women particularly, who stand most in need, the charitable services of the welfare department and hospital are exercised to an extensive degree. While there are, of course, the dangers in too free and obvious charity, the nurses in the department were trained in the Visiting Nurses' Association, and understand how to dispense aid

and the nurses in every case are familiar with the home circumstances—the nurses take them in charge and see that their needs are supplied. Often this means going the full extent of charity, with a large draft on the emergency fund. Girls are placed in sanatoriums or hospitals, where they receive care and treatment which would be out of the question were they left to their own resources. The case is on record, for example, of a girl who showed signs of nervous breakdown. While she experienced no particular aches or pains, and even her immediate relatives failed to regard her case as in any wise serious, it was deemed necessary to send her on a period of rest. Accommodations were secured for her in a sanatorium, and within a few weeks she was able to return restored in health and strength. The girls understand that they are welcome to come to the nurses for friendly advice on any of their personal affairs, whatever the difficulty may be.

Every day a report from the superintendent's office is handed to the nurses, giving the names of any women who have been absent for two days on account of illness, and the nurses call at their homes. There she gives such professional service as is necessary, and sees to it that the



Fig. 2. Armour & Co., Chicago. Dispensary of the emergency hospital.

patient is put into a fair way for recovery. Visits to the plants are made at the noon hour, and the girls are given talks on personal hygiene.

The welfare department works in close conjunction with the settlement houses in the stock yard district. The intercommunication among these and the welfare department

bring to light cases for action which might otherwise be overlooked.

In addition to the medical and surgical service performed, an extensive activity of a general welfare nature is conducted. The nurses go out on daily rounds of visiting among homes of the employees of the class who may need such attention. They preach the gospel of fresh air and sanitary living, and gather information regarding the home conditions of the workers in the plant. Sometimes they are instrumental in bettering housing conditions. They advise mothers about their daughters, and perform the innumerable services which come properly within the function of a visiting nurse or a settlement worker.

In this way the company keeps an accurate record of the welfare of its plant employees. The aim is to keep them healthy, contented, and well conditioned generally. This is good humanitarianism and good business combined, and has its beneficial effects reflected in the character of the work turned out by the employees.

#### Parke, Davis & Co., Detroit, Mich.

Parke, Davis & Co. maintains a first aid hospital at its plant. The general welfare work of this character is in charge of Dr. C. I. Iber, and the hospital is fully equipped for first aid work. Safety appliances and a general re-

branch of the Grace Whitney Hoff League, and the other is a purely Parke-Davis organization known as the Women's Association. The former, which has branches in all large industrial concerns in Detroit, is under the auspices of the Young Women's Christian Association. Membership entitles the girl to attendance at classes held twice a week and to gymnasium privileges; also to a room in a hospital and a trip to an outing camp at very nominal rates. The Women's Association holds classes in cooking, sewing, millinery, physical training, and elementary English, the instructors being provided by the firm.

Miss Mary T. Buckley, president of the Women's Association, who has been with the firm nearly fifteen years, and who has excellent judgment, based on a thorough knowledge of conditions, is much interested in the welfare of the women. She goes into the homes of women employees who are sick, looks up absentees, counsels the girls in a general way, and listens to their individual grievances if any arise. She has also charge of the employees' library.

The girls have a large recreation room, which is enjoyed jointly by the two clubs. Entertainments are arranged twice a week during the noon hour, some of the best talent in Detroit and other cities being presented. Musical numbers predominate, but there are often readings, and occasionally a brief lecture by some well-known



Fig. 1. Parke, Davis & Co., Detroit. First aid and dressing room.

gard for the welfare of employees render serious injuries of rare occurrence, and, as far as accidents are concerned, Dr. Iber's work is confined almost wholly to first aid ministrations.

Quite apart from the hospital work are two women's organizations, which look after the women employees in a general as well as a medical way. One of these is a

authority. The recreation room contains, in addition to the usual accessories, two pianos.

Under the auspices of one of the organizations mentioned there are a glee club, dancing club, dramatic club, and tennis club. Dancing parties are held monthly during the cooler seasons.

The employees' library contains over 2,000 volumes, and



more than 190 periodicals are circulated. The usual library regulations prevail with respect to the books, and magazines may also be taken to the home. Each employee is entitled to the home privilege of ten periodicals a month.



Fig. 2. Parke, Davis & Co., Detroit. Dancing pavilion.

A feature of welfare work which has met with considerable favor is the savings account system for girls. This was established in February, 1914, and the employees now have many thousand dollars to their credit. Each girl main-



Fig. 3. Parke, Davis & Co., Detroit. Women's restaurant.

tains her separate account, the amount she designates each month being deposited in an outside savings bank. All details in connection with this feature are looked after by the firm.

Once each year the firm gives its employees a holiday



Fig. 4. Parke, Davis & Co., Detroit. Men's cafeteria.

excursion, which takes place in June, and the entire plant is closed for the day without loss to the employees. The house charters two large excursion boats, and prizes are donated for field sports and athletic events.

An organization of executives, heads of departments, and their assistants is known as the Goodfellowship Club. Meetings are held four times a year, and a special fund is devoted to the sending of flowers to the bedside of the sick.

Two cafeterias are maintained, one for the men, the other for the women, both being under the same outside management, and the firm furnishes the rooms, light, heat, etc. The schedule of prices is a part of a written contract, and the price of a good lunch or meal is nominal.

An ample pension system provides payments for employees of a certain age who have been in the service of the house twenty years or more.

A fire department is a picturesque part of the organization. A call is often sounded when a large gathering of visitors is going through the plant, and the quick response and efficient exhibition adds an element of thrill to the sight-seeing.

#### Brown & Sharpe Manufacturing Company, Providence, R. I.

BY LUTHER D. BURLINGAME, Industrial Superintendent.

One of the most notable developments in modern industry is the attention given to the health and comfort of the employees. It has been conclusively demonstrated that activities along these lines, when properly directed, not only reduce accidents and illness, and raise the standard of living, but also give direct results in increased efficiency and production in the work of the factory.

The Brown & Sharpe Manufacturing Company has taken an interest in such work from the inception of the business in 1833, which interest has been increasingly active in recent years. Among the prominent features are the guarding of machinery, instruction in safety methods, and the supervision of the health of the employees, including the installation of a complete dispensary (Fig. 1), with a physician in attendance at stated hours and an experienced male nurse in attendance during all working hours, this service being rendered to employees without charge.

Another line of activity, and one which has been longest established, is the training and instruction of apprentices, these being trained in a number of trades connected with machine work, under the supervision of experienced men. This includes not only ordinary instruction in the shop, but also school training of such character as will be useful in the particular trade being taught.

Primary conditions for healthful employment are good ventilation, proper regulation of temperature, good drinking water, and proper toilet facilities, these matters having been given careful consideration in the designing and maintenance of the factory buildings.

The care of machinery has grown to be more than that required to protect the machines from damage through wear or breakage, it having become of prime importance to guard them so that the workman will be protected. In addition to all that has been done in the past in guarding machines in the Brown & Sharpe factory, a force of men is employed whose duty it is to apply additional guards, not only to new machines being installed, but also in still further improving the guarding of machines in use. The steps taken in this direction have reduced the percentage of accidents resulting from such causes as unguarded gears, belts, projections on revolving parts, and other hazards due to the mechanism of the machines, so that the relative proportion of such accidents is now materially less than in former years. It has been shown that there is need of proper efforts to reduce the number of what are known as nonmechanical accidents, which can in a large

majority of cases be ascribed directly to the carelessness of the workmen, and one of the best efforts in this direction is believed to be to inject the "safety spirit" into the working force. An important means to this end is the organization of safety committees, on which the men will be represented, and where they will be frequently re-

In addition to the ordinary methods of ventilation, special means are provided in departments where noxious fumes or dust occur, in which cases properly constructed exhausts carry away the objectionable matter.

A condition of neatness and orderliness is an important factor in reducing accidents, and one way to bring about such a condition is to paint lines on the floors of the factory indicating where passageways are to be kept clear (Fig. 1).

Wash rooms are provided, with open coat racks, which have steam pipes below to dry the clothing if it is damp. There is provision for an individual stream of water for each workman, the streams coming from the pipe just below the soap rack above each trough. In the foundry wash rooms are shower baths (Fig. 2), and here individual lockers are provided for the clothing.

In addition to the school work connected with the training of apprentices, to which reference has been made, classes are being conducted in English for the training of those foreign-born employees who speak only their native languages, and there are also classes in citizenship, where instruction is given to those who are of alien

birth, so that they may be prepared to become eligible to American citizenship.

The general spirit sought to have prevail in this factory has been to encourage employees to improve themselves rather than to carry out measures that are sometimes called "paternal."

minded of the need of caution by having safety matters brought to their attention.

One means of reducing accidents of this character is the issuing of a booklet, "Health and Safety," in which accident prevention has been made a prominent feature, and the care of the health of the employees is also carefully considered. A copy of this booklet is given to each employee when he enters the service of the firm, and it has proved popular, not only in this factory, but it has also been in considerable demand from outside factories. Accompanying this book, when given to new employees, is a card reading as follows:

**SAFETY FIRST.**—The accidents in our shop are largely to new men, and largely on account of carelessness. You are one of these new men, and it is one of your important duties to work safely and avoid accidents. Read "Health and Safety" carefully."

Brown & Sharpe Mfg. Co.

This is followed up personally by a member of the safety committee in the department where the new employee is at work.

Another means of keeping these safety matters before the workmen is by posting bulletins, showing monthly records, giving the relative standing of the departments by a diagram as to the number of accidents. The purpose of these bulletins is to encourage a good-natured rivalry between the different departments in the matter of securing a high standing for safety.



Fig. 1. Brown & Sharpe Manufacturing Company, Providence. Lines on floor to indicate clear passage way.



Fig. 2. Brown & Sharpe Manufacturing Company, Providence. Shower baths in foundry wash room, with individual lockers.

The location of the factory near the center of a large and prosperous community, where the facilities of restaurants, boarding-houses, etc., are ample, and where there is an opportunity for choice of living conditions, avoids a problem which is so often an important consideration where factories are situated in isolated locations.



## Jones Store Company, Kansas City, Mo.

BY L. M. JONES.

About eight years ago we organized in the store the Mutual Benefit Association, the object of which was to carry out an idea we had cherished for many years—that is, that such an organization founded on the principles of cooperation could do much more for its members collectively than the individual could do singly. The membership of this organization is composed of the employees of the store, and the object is to promote the interests of its members, to extend aid in cases of distress, sickness, or death, and to provide mental training and recreation. All old employees of the store are members of the association, and new employees become members after four weeks' service. When a person ceases to be an employee of the Jones Store Company, that person at once ceases to be a member of the Mutual Benefit Association. The membership is divided into four groups as to the payment of dues as follows:

Group No. 1.—All members earning \$4 and less per week are assessed 15 cents per month. (We have no employees earning as little as that now, but this rate was established when the organization was formed and refers only to that time.)

Group No. 2.—All members earning over \$4 and less than \$7 per week are assessed 25 cents per month.

Group No. 3.—All members earning \$7 and not more than \$10 per week are assessed 40 cents per month.

Group No. 4.—All members earning over \$10 per week are assessed 50 cents per month.

Members are entitled to sick benefits after three months' membership according to the following schedule: group No. 1, \$2 per week; group No. 2, \$3.50 per week; group No. 3, \$5 per week; group No. 4, \$7.50 per week.

Benefits are to be paid for each full week's absence due to sickness or disability. No benefits will be paid for less than one week's absence and not more than six consecutive weeks in twelve months and not more than ten weeks in any one year.

Death benefits are paid as follows: group No. 1, \$50; group No. 2, \$75; group No. 3, \$100; group No. 4, \$150; provided that the member has belonged to the association for one year; if less than one year, the death benefit is prorated according to the length of employment.

This association maintains a well-equipped hospital, with necessary private rooms, beds, cots, and surgical instruments. A medical dispensary is maintained in the hospital, where an average number of twenty-five persons are treated daily. The association and the store share in the expense of providing, free to all members, a physician and trained nurse. All medicine is furnished free of charge by the store. In 1915 the association distributed for assistance more than \$6,000, and more than 7,000 individuals were treated by the medical department.

The annual report shows that 223 sick claims were paid, amounting to \$3,164; and three death claims were paid, amounting to \$450. At the end of the year the association had on hand in cash \$2,300. The store contributed to the association last year about \$1,600, which covered medicine, part of the salaries of nurse and physician, and all the expense of the employees' outing. It also furnishes telephone, laundry, and porter service, and premises for the hospital, library, etc.

The association, through its annual outings, its various entertainments, library, and other activities, has assisted in bringing about a better store spirit, promoting the idea that we are one great family with common interests, that by working along the line of cooperation and real fellow-

ship we accomplish much for our individual selves as well as for the organization.

As an example of the entertainments, we cite the one given in Convention Hall recently, where there was an attendance of more than 5,000 people, on which occasion the members and their friends not only had a splendid time, but realized several hundred dollars for the benefit of the emergency fund.

The annual outing given under the auspices of the association is one of the most delightful events of the year. The store is closed for that day, street cars are chartered, and the employees and their families go out to one of the parks, where a good free dinner, including old-fashioned barbecued meat, is served. After dinner those present enjoy the concessions in the park, or indulge in boating, bathing, dancing, and many kinds of athletic games. Business is entirely forgotten, and the occasion is so enjoyable that it is looked forward to from one year to another.

On the fifth floor of the Twelfth and Main street building, where there is an abundance of room and sunshine, a cafeteria is maintained for the employees. Food is furnished to the employees at cost, and is of the best quality, being the same quality as furnished in our cafe for customers.

A matron is furnished by the store to look after the welfare of the girls, investigating their home surroundings and otherwise assisting them in every way possible. The store also has a rest room for the girls, which is furnished with rocking chairs, couches, library table, and piano. In connection with the rest room is the library containing several hundred volumes. A week's vacation with full pay is given to those who have been in the employ of the store for one year.

The educational work of the store is conducted by the "school of efficiency," which was organized several years ago, and has proved a great success in improving the general efficiency of the store organization. Regular instruction is given in classes for salespeople, cashiers, inspectors, floormen, assistant managers, drivers, and wagon boys; in fact, through the educational department every employee is reached. Once a week we have a session of what is known as the "blunder" class, composed of employees who have made errors during the week.

As mentioned in this article, all these activities tend to promote the idea of team-work and cooperation. The practical results are shown in increased efficiency, a livelier enthusiasm, and a stronger devotion to the interests of the business.

We believe in appealing to and building up the good in our employees, recognizing their inalienable rights as men and women, treating them with that consideration that promotes their self-respect and creates in them a desire and ambition to advance the best interests of the institution with which they are connected. We endeavor to bring about a feeling of mutual interest and unity of purpose between employer and employee. We believe that scolding, fault-finding, and slave-driving methods are rapidly being eliminated in modern business concerns, and that employers who use force instead of reason are out of harmony with the spirit of this age. We believe the employer who takes a personal interest in the welfare of his employees not only brings happiness to them, but his efforts react on himself, enlarging his sympathies and ennobling his character. In this respect there is no better investment for the employer than to distribute good cheer throughout his establishment.

Perhaps such work is at least a partial answer to the

age-old question, "Am I my brother's keeper?" We can state from experience that the work briefly described in this paper has a great influence in improving and stimulating the human factor, and in creating enthusiasm and loyalty in all the activities of our concern. Enthusiasm and true loyalty must, however, be voluntary, as they cannot be purchased with salary.

#### American Rolling Mills Company, Middletown, Ohio

Welfare work, as understood at the plant of the American Rolling Mills Company, means the conservation of health, life, and limb of the employees, and thereby increasing the happiness of those related to it in any way.

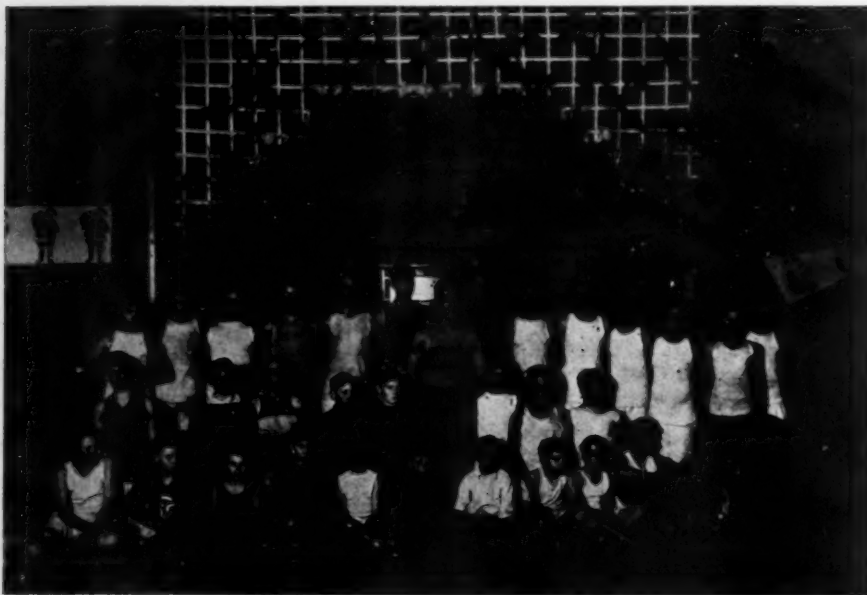


Fig. 1. American Rolling Mills Company, Middletown. Boys' gymnastic class of the Armco Association.

The company believes that the foundation of this work is the home, and it therefore has interested itself in civic movements for better sanitation, better streets, more parks and playgrounds, to the end that better homes may be made. The company owns forty-five houses, the larger number of which are occupied by people who were born in Europe. There is plenty of space around each house for grass, flowers, and garden. One group of houses is so arranged that there is a community bath house for each four. This group is known as Garden City, was built three years ago as an experiment, and has proved very satisfactory. To further encourage the spirit of individual responsibility and appreciation for "the things worth while," cash prizes are given each month for the cleanest houses and each season for the best kept lawns and gardens.

To encourage in its workmen some of the good and healthful hobbies that, to some extent, nearly everyone has, the company has assisted in financing an association to which all employees belong, and which is managed by the employees. It has a general secretary, physical director, stew-

ard, and foreign secretary, and operates the Armco Club and the Armco Foreign Club. In these two club houses or on Armco field, the latter being the property of the company, any employee can develop and satisfy his hobby to the fullest extent, whether it be billiards, cards, gymnastics, basketball, baseball, tennis, or the reading of good books in the quietude of the club library. These features develop initiative, alertness, and thoughtfulness.

Probably no other company has made greater effort to install safety devices, but it believes a careful man with no safeguards is a safer man than a careless workman with all the guards that can be thrown around him. Guards alone will not protect, and therefore the first thought, once a man is inside the plant, is to impress him with his individual responsibility in the safeguarding of his life and the life of his fellow-workmen. This is done by giving special instructions to assistant superintendents, foremen, subforemen, and workmen in general; by joint meeting of the superintendents, central safety committee, and chief surgeon, which meeting is held once a month in the office of the general superintendent, and through articles and notices in the Armco Bulletin. Signs, bulletins, and printed instructions are posted throughout the plants; an annual safety first meeting is held, to which all employees and their families are invited, and assistance is given by the safety and sanitary officers, who are patrolling the plant both day and night.

In order that every employee can have pure water to drink a separate water line reaches every part of the mill. This water comes from seven deep wells, and as a special precaution this water is analyzed regularly. The sanitary closets, wash rooms, and showers that have been installed assist in maintaining the health of the organization.

When a workman is injured, no matter how slight the

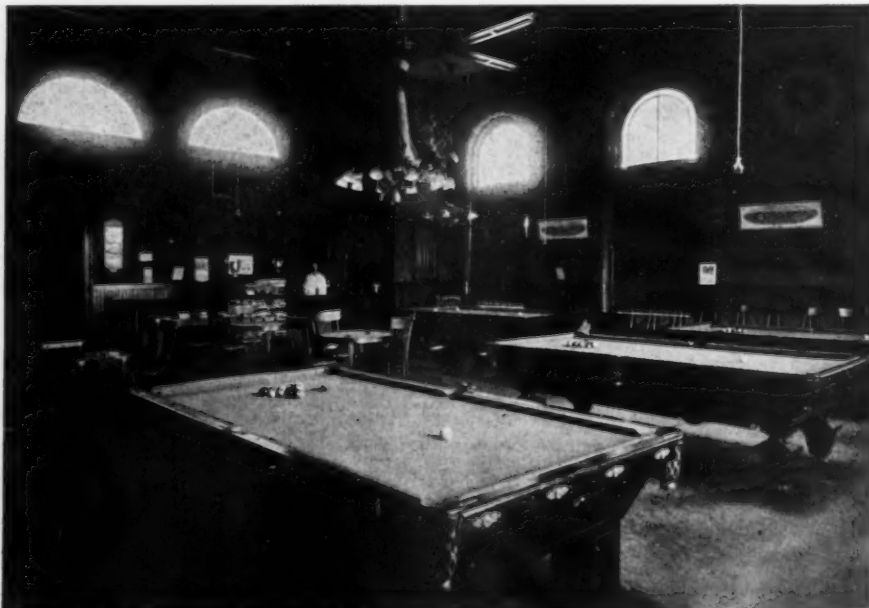


Fig. 2. American Rolling Mills Company, Middletown. Billiard room of the Armco Association.



injury may be, he is given first aid in his department, and, if deemed advisable, is sent to the hospital by his foreman or superintendent. The hospital is a brick and concrete building 36 by 44 feet, located on a small hillside near the main entrance of the company's largest plant, the east side works. While this is not a large hospital, it is complete

employment he is paid at the rate of \$6 per week after the first week, and not to exceed thirty-nine weeks, by the Armco association.

#### Western Electric Company, Chicago, Ill.

The Western Electric Company, at its Hawthorne works in Chicago, employs approximately 15,000 people—men and women. The company lays particular stress on its sick and death benefit provisions, and its pension funds, and these features of its welfare work are so important that they are given below.

#### PENSIONS AND BENEFITS

1. PENSIONS.—Retirement on pensions is provided for employees coming under the classes listed below. Employees in Class A may be retired on pension either at their own request or at the discretion of the committee. Employees in Classes B and C may be retired on pension only at the discretion of the committee and with the approval of the president or vice-president.

*Class A.*—Employees whose age is 60 years or more (female 55 or more) and whose term of employment has been twenty years or more.

*Class B.*—Employees whose age is 55 to 59 years (females 50 to 54) and whose term of employment has been twenty-five years or more.

*Class C.*—Employees whose age is less than 55 years (female less than 50) and whose term of employment has been thirty years or more.

*Class D (Disability Pension).*—Any employee whose term of employment has been fifteen years or more and who becomes totally disabled by reason of sickness may, at the discretion of the committee and with the approval of the president or vice-president, be granted a disability pension, which shall continue for such period only as the committee may decide.

The amount of the annual pension in any of the above cases is 1 percent of the average annual pay for ten years, multiplied by the number of years of the employee's term of employment. Example: an



Fig. 3. American Rolling Mills Company, Middletown. Type of houses in the Garden City colony.

in its equipment, and seven or eight patients can, if necessary, be cared for indefinitely. Its organization and equipment have proved ample to take care of any emergency that has arisen. In addition to the hospital, a fully equipped dressing room is maintained at the central works, where all slight injuries that occur at this plant receive attention.

In every department of all plants are blankets, stretchers, and "red cross" boxes containing bandages and such other emergency supplies as would most likely be needed in that particular department. The medical department is in charge of a chief surgeon, who is assisted by a house surgeon and three nurses, two male and one female.

Both injured and sick employees receive compensation. When injured within the plants, the employee is paid according to the provisions of the Ohio State Workmen's Compensation Act, which in brief is as follows:

"In case of temporary disability, the employee shall receive 66⅔ percent of his average weekly wages so long as disability is total, not to exceed a maximum of \$12 per week, in which event he shall receive compensation equal to his full wages; but in no case to continue for more than six years from the date of the injury or to exceed \$3,750."

For injury resulting in partial disability, permanent total disability, or death, a graduate scale of remuneration is paid by the company under the same act.

In sickness or injury incurred outside of regular em-



Fig. 4. American Rolling Mills Company, Middletown. First aid team.

employee whose term of employment at time of retirement has been thirty years and whose average pay for ten years has been \$1,500 a year will receive an annual pension equal to 30 percent of \$1,500, or \$450, payable in monthly amounts of \$37.50. The minimum pension will be \$20 a month, but this is not to apply to disability pensions granted to employees of less than twenty years' service or to pensions granted to "part time" employees.

**2. ACCIDENT DISABILITY BENEFITS.**—Total Disability—Full pay thirteen weeks, half pay for remainder of disability. Maximum benefits to be \$20 a week after six years of benefit payments.

**Partial Disability.**—For first thirteen weeks, 100 percent of loss in earning capacity; for remainder of disability, 50 percent of loss in earning capacity. Period of payments not to exceed six years in all.

**3. SICKNESS DISABILITY BENEFITS.**—These benefits begin on the eighth calendar day absence on account of sickness and are as follows: (a) for employees whose term of employment has been ten years or more—full pay thirteen weeks, half pay thirty-nine weeks; (b) for employees whose term of employment has been five years or more, but less than ten years—full pay thirteen weeks, half pay thirteen weeks; (c) for employees whose term of employment has been two years or more, but less than five years—full pay four weeks, half pay nine weeks. Benefits are not provided in the plan for sickness of employees of less than two years' service. In such cases such practice as the company may establish from time to time will be followed.

**4. DEATH BENEFITS.**—These are payable only to wife (or husband) or dependent relatives of deceased employee, and are: (a) Sickness death benefits—If employee's term of employment has been ten years or more, one year's pay, not to exceed \$2,000; if employee's term of employment has been five years or more, but less than ten years, six months' pay, not to exceed \$2,000. (b) Accident death benefits—Three years' pay, not to exceed \$5,000, and the necessary expenses of burial, not to exceed \$150.

In addition, the company has a very beautiful hospital in which there are 6 beds, 3 for men and 3 for women, to be used only in emergency, an operating room fitted up with every modern convenience, including a unique and very efficient day and night lighting scheme. It has three first aid dressing rooms for men and three for women, with a central waiting room for each sex, and one large dressing room in the center of this grouping. In another part of this hospital building there are three other examination rooms for each sex, leading off of a central record room. This suite is for the examination of applicants for employment.

There is a very complete x-ray outfit, with latest types of the various machines, and three laboratory rooms—one for the urines and excreta, one for surgical pathological work, and one for bacteriology, which means making and keeping of vaccines, serums, and autogenous vaccines. There are incubators and refrigerators in these rooms, and a peculiarly efficient centrifuge with high revolution power for throwing down such bacteria as tuberculosis, etc.

Every applicant for employment is given a medical examination. It seems this feature of the company's work had to be inaugurated rather carefully and gradually. Up to a short time ago these examinations were held a month or six weeks after the person was employed, the purpose being to determine first whether the person could be made into a good employee and was desirable for a permanent place; this applied largely to the lower class of employees—those who receive \$15 a week or less. But this scheme did not work well; the foremen complained that people were sent to them, and that they took pains and spent time teaching them the business for a month or six weeks, and then they were turned down for some physical defect, which disorganized their departments. An attempt is now made to examine all applicants before they are employed, and it is the purpose to draw this line very closely and to make the medical examination more rigid in the future. Careful records are kept on a card index system of these examinations, one side of the card being devoted to the medical and physical examination and the other to be filled out by the patient, concerning his antecedents, previous employment, nativity, and other statistical data. These cards are rather elaborate; the medical side is dictated by one of four examining physicians employed by the company and set down by a nurse who acts as clerk.

The company's cafeteria and restaurant service is elaborate, the cafeteria room being about 100 by 200 feet, with a two-way service counter. Meals selected more for the

quality and value of the foods than because of their appeal to the appetites, especially of young women, are furnished at cost, and payment is made for the meal by each person as he or she leaves the room. An upstairs dining room has tables and waitresses, and is patronized more largely by officers of the corporation and foremen, who can afford to pay a slightly larger amount for their lunches. There is a large modern kitchen, thoroughly well ventilated, an elaborate dishwashing outfit in another room, and another room is devoted to the preparation of vegetables and fruits; the butcher shop is just off a large refrigeration room cooled by brine coils, in which the meat is kept. There is a complete bakeshop, with modern oven for breads, pastry, and pies.

The company is studying the problem of a periodic examination of all employees, and intends to begin by making the examination optional, beginning with the higher officers and foremen of the corporation, with the intention to gradually extend it to all employees. At the present time the regular monthly examination of employees engaged in those occupations that lead to occupational disease are held, and consist of quite a rigid clinical examination by the dispensary doctors.

Brown & Bigelow, St. Paul, Minn.

BY S. F. HOLMES, Sales Department.

After all is said and done about the system and the labor-saving devices of the factory, there remains the important relation of employer to employee to explain the growth of some factories and the decline of others. It is this relation and the prevailing spirit among the employees themselves that is the subject of this article. The duty of the employer does not stop when he has provided a place to work, work to do, and the regular payment of a certain sum. The employee is more than a means to an end—he is also an end in himself.

By taking a vital interest in the mental, moral, and



Fig. 1. Brown & Bigelow, St. Paul. Anniversary banquet to employees for length of service and punctuality.

physical welfare of his employees, providing material advantages in the way of amusement and benevolent funds, the employer finds that the manpower of the factory is increased, and he is more than repaid in increased production for the health, happiness, and good-will he has made possible for his employees. He finds that by these methods his cost of production has not materially increased, while the output is nearer the maximum in quantity and quality than would have been possible under the impersonal method. This is the policy that is substantially followed by Brown & Bigelow, Inc., of St. Paul. This policy, as carried out by the firm, is very simple in operation. The employees, through their organization, known as the Brown & Bigelow Employees' Club and Benevolent Association, conduct the welfare work. The welfare work is the product of the firm's policy, but the details of the management and operation are directed by



the employees themselves. The activities of the organization are the provision for athletic and recreational features, the management of the lunch room, and the handling of the benefit insurance fund.

The basis for the work of the employees' organization is supplied by Brown & Bigelow. Their model factory building is located out of the down-town district, where fresh air and sunlight permeate every nook and corner. Each department is a healthful and enjoyable place to

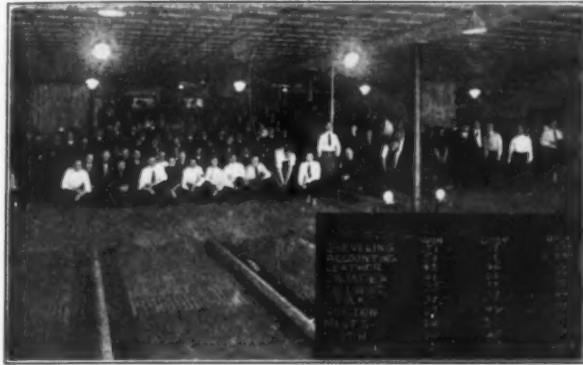


Fig. 2. Brown & Bigelow, St. Paul. Bowling teams and alleys.

work, and on the grounds of the factory the firm has provided baseball diamonds, tennis courts, and quoit courts. Here in summer the employees amuse themselves during the noon hour. The girls have a baseball team, which plays with other teams in the city. Games from the various departments also create interest, and aid to centralize the attention of the employees on their work at the plant. When fall comes, a bowling league is organized composed of teams from the various departments. The directors of the firm present a loving cup to the winning team at the close of the season.

One evening every two weeks during the winter months a dance is held in the club rooms, and a dancing teacher instructs those who desire to learn in the latest steps. Once every six weeks the employees have a dance in the St. Paul Armory, to which there is a minimum charge. The employees are given an annual picnic at one of the many parks about the city. Here all get together—managers, office force, the factory hands—and spend the day playing games and enjoying the fresh air. The expenses



Fig. 3. Brown & Bigelow, St. Paul. Free dancing classes during the winter.

of this picnic are paid by the picnic fund, the money derived from forfeitures due to tardiness on the weekly time card.

The second activity of the employees' association is the management of the lunch room. When the factory was built, special provision was made for lunching conveniences, and a large, pleasant room of over 5,000 square feet of floor space was arranged for this purpose on the first floor. The kitchen equipment was supplied by the

firm, and is of the most improved character, but the property of the lunch room was purchased by the employees from their own funds. The purpose of the lunch room is not to make profit, but to give the employees wholesome, well-cooked food at cost. Whenever a profit is made, the surplus is spent in buying silverware, tables and chairs, and in supplying the girls' baseball team with suits. Over 500 eat here daily, and occasionally there are several musical numbers during the meal.

There are two kinds of service—cafeteria and restaurant. Those who choose pass around a counter, cafeteria style, and get a glass of milk, hot coffee, bowl of soup, ice cream, etc., to supplement a lunch from home. Those who wish an entire meal have tables reserved for them at one end of the room, where they are waited on by girls from the factory. The menu consists of soup, three choices of meat, potatoes, choice of three side dishes, bread and butter, tea, coffee or milk, and pie or ice cream. All the food is well cooked and clean, and for this meal only 25 cents is charged. At present this charge pays all expenses and equipment, and occasionally a surplus accrues, which is used for the benefit of the girls' baseball team.

The most important feature of the work of the employees' association is the maintenance of the insurance and benevolent fund. This fund is provided by assessments of the employees, who, according to wages received, are divided into two classes, A and B. Class A employees pay 25 cents per month, and their sick benefit is \$5. per



Fig. 4. Brown & Bigelow, St. Paul. Tennis tournament being held on the employees' club court adjoining the factory.

week and death benefit is \$100. Class B employees pay 15 cents per month, and receive a sick benefit of \$3.00 per week and death benefit of \$50. This rate has been carefully calculated, for during the ten years of its operation the fund has met all claims, and there has been no appreciable surplus.

By means of this organization other benefits have been made possible. Through its agency a Young Women's Christian Association worker comes to the factory every Friday and talks to the girls during the noon hour, giving them help and kindly advice. Another benefit is derived from the mutual interest purpose that actuates the employees, and hence a sense of loyalty to the firm and to each other pervades each department and raises the tone of the surroundings.

Thus, referring to the introduction of this article, Brown & Bigelow regard their employees as a great happy family, and are well pleased with the results. Their cheerful, loyal employees turn out more and better work, which well repays them in increased output for the health, happiness, and good-will they have made possible for their employees.

#### The Larkin Company, Buffalo, N. Y.

The Larkin Company, soap makers, perfumers, chemists, and importers of food specialties, has two large dormitory buildings in which many of its women employees are housed, and all those who wish to live in the dormitory

can do so. There is a sorority and something of club life, a dormitory restaurant, cozy parlors, a sewing room, with cutting tables and electrically moved machines, where girls can make their own clothes, and there is a well-appointed laundry where the girls can do their own special laundry work and learn how it is done.

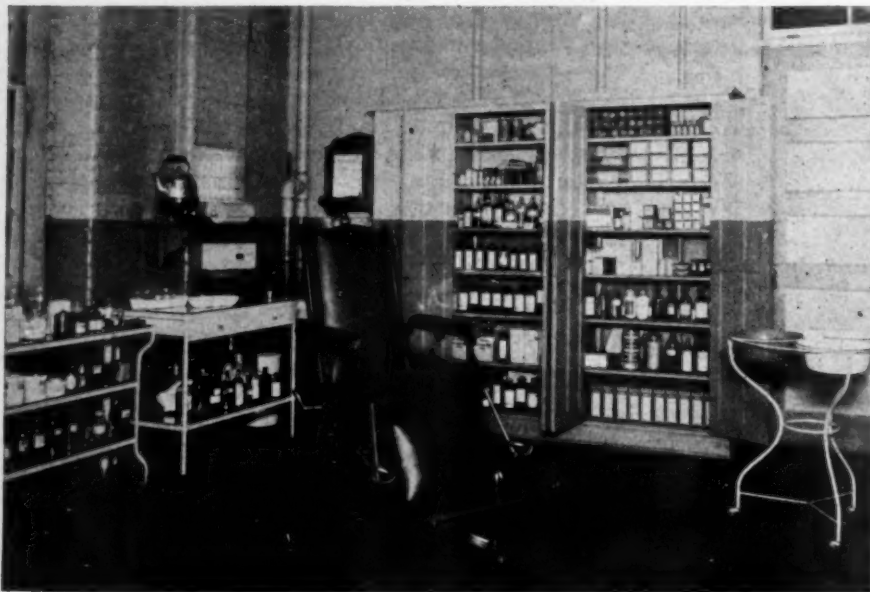


Fig. 1. The Larkin Company, Buffalo. Doctor's office in the factory.

The medical staff is headed by a woman physician, a dentist, a trained nurse, and a practical nurse. The company has special arrangements for medical attention in the special branches, and employees are served by these specialists at a reduced fee. The company makes no charge for general medical service. There is an excellent dispensary and dressing room and small emergency operating room in the factory. Dental work is done for employees without expense to them. There is visiting nursing in the homes when it is necessary. There is a benefit association, with dues varying from 20 to 60 cents per month, and, in addition to contributions in this way by the 1,300 employees, the company distributes to its members approximately \$4,000 a year in benefits. Sick benefits run from \$2.50 to \$7.50 per week for thirteen weeks, and death benefits run from \$50 to \$100. There is a school in which commercial branches are taught. There is a bonus plan which provides a 10 percent bonus to employees for excellence in their work. The 1,300 employees of the Larkin Company have savings in the Larkin bank amounting to over \$300,000, on which the company pays 5 percent interest, compounded quarterly. Employees who have saved \$500 may borrow from the company to build or purchase their own homes, and repayment is made on a basis of 10 percent a year. There is a legal department of the company that serves employees, even going into court to help them in their legal troubles. The "loan shark" industry has been virtually discontinued

by decided action of the company, which refuses to discharge employees who have failed to make their payments, and permits the loan shark to collect only the principal and the legal rate of interest. This has resulted in the practical elimination of the loan shark. There is an excellent restaurant at which employees obtain good food at cost.

#### Marshall Field & Co., Chicago, Ill.

Nine thousand people are employed in the retail store of Marshall Field & Co., Chicago. There is mechanical ventilation in all the lower floors of the establishment, vacuum cleaning everywhere, and every effort is made to preserve a wholesome atmosphere and to prevent disease germs from invading the premises. A physician is employed, whose whole time is taken up with the sanitation and hygiene of the great store. This physician also directs the work in the rest rooms, which are conducted in two parts—one part for employees and one part for patrons—and in the dispensary and hospital maintained in the store. This physician, through his assistants, looks into the home lives of employees, and thus comes to know primary causes of many illnesses to which employees are subject, and ef-

forts are made through the guardians of the homes to improve the hygiene and sanitation wherever necessary. The company does not maintain a hospital, but does maintain wards in two general hospitals in Chicago for its employees, and bears the same relationship to two sanatoriums for the care of tuberculous patients, though the



Fig. 2. The Larkin Company, Buffalo. Women's rest room.

company claims to have very few of the latter developed.

Every effort is made to keep, more especially, women employees in good health. Dryer rooms are maintained, with steam coils, where the young women may dry their shoes and skirts in wet weather. The company maintains



a cafeteria lunch room for employees, in which more than 3,000 are fed daily, the others bringing their lunches. The average cost of a soup, meat, and dessert, with bread and butter and a beverage, is 11 cents. A substation of the Chicago Public Library is maintained for the use of employees, and more than 6,000 volumes per month are used. A school is maintained for the younger employees, and the boys and girls are given two hours each day in which to study arithmetic, spelling, grammar, and penmanship. These school hours are maintained during the time that the store is open, so that the employees are paid for the time at school. On the completion of the course of study in the school, diplomas are given for completion of courses similar to those in the public grammar schools of the city.

There is a superintendent in this school and educational department, who has taken a very great interest in the welfare of those who come under his surveillance among the men and boys employed, and a woman superintendent occupies a similar position for the women and girls. These two directors are in touch with the home lives of the employees, and make every effort to help them with their domestic, social, and health problems.

There is a choral society of 200 members, who rehearse every Monday evening, and a concert is given each year. All members of the choral society who attend 75 percent of the rehearsals each year are given extra vacations. The serious operas are sung at these annual song festivals. A baseball league is one of the athletic features, there being from four to six teams in the retail store and the same number in the wholesale department, located in another part of the loop district of the city. These teams play for trophies, the principal one of which is called the John G. Shedd Trophy Cup, hung up by Mr. Shedd, president of Marshall Field & Co.

Employees receive two weeks vacation, with full pay, each summer, and half pay when sick, no matter what the length of time is. The men employees are encouraged to join militia companies, and an extra vacation is given each year for encampment purposes to those who join. There is also a fire brigade on each floor in the store, and members obtain extra vacation on account of this service.

The company makes a special point of avoiding the patronage of employees or any suggestion of charity, in order that the employees of the corporation may learn to rely on themselves and to maintain their self-respect and individual freedom.

#### The Santa Fe Railway System<sup>1</sup>

DATA FURNISHED BY MR. E. P. RIPLEY, President.

This company has no so-called welfare department, but is engaged in various branches of welfare work, and I outline below the facts concerning these activities:

**HOSPITAL ASSOCIATION.**—This association was organized by our employees, and is supported by a small monthly contribution from them, based on the amount of salary earned by each, the amount in no instance being more than \$1 a month. For the sake of convenience, this contribution is deducted by the railway company from the employees' monthly pay checks and turned over to the association. The latter provides free medical and surgical attention by competent physicians, surgeons, and nurses to all employees requiring it. The hospital buildings, thoroughly

modern in construction and equipment, were in nearly every instance erected at the expense of the company and by it donated to the association, because of the company's desire to assist its employees in providing adequate hospital facilities.

**READING ROOMS.**—A pamphlet entitled "The Santa Fe Reading Room System," by Mr. S. E. Busser, a copy of which is sent herewith, gives a very complete history of and clear insight into the workings of this institution.

**PENSIONS.**—A pamphlet descriptive of our pension system is also sent herewith. This system became operative January 1, 1907. The provisions of the system are unusually liberal, particular attention being called to the high minimum amount which is paid. The company bears the entire expense of this pension system, the employees making no contribution whatever to its support.

**EMPLOYEES' MAGAZINE.**—A copy of "The Santa Fe Magazine," which is published monthly, is sent free to each employee for the purpose of creating a broader and more intelligent interest on the part of the employee in their railroad and in each other.

**APPRENTICE INSTRUCTION SYSTEM.**—A pamphlet describing this feature, issued by our supervisor of apprentices, gives a brief, but complete, outline of this system.

**TELEGRAPH SCHOOL.**—The company also operates a small telegraph school, with an average daily attendance of fifty students. Instructions in telegraphy and station accounting are given in a five months' course, the completion of which it is assumed will qualify men of the right material for positions as operators.

**SAFETY DEPARTMENT.**—This department was created about four years ago, with Mr. Isaiah Hale in charge as commissioner of safety, with headquarters at Topeka, Kan. Mr. Hale travels over the line organizing the men and appointing safety committees from the various departments at each point. The work is being pushed actively through personal contact of our officers with the men, by safety lectures and rallies, and by moving pictures and stereopticon lessons given at various points along our lines. A small amount of literature is also distributed.

The company does not conduct cafeterias or lunch rooms for the exclusive benefit of employees, but at the numerous eating houses located at the passenger stations of the company employees are furnished meals at an exceedingly low rate—a rate considerably lower than the actual cost of the food. This is made possible through an arrangement made by the company with Fred. Harvey, by whom these eating houses are conducted. Sanitary and comfortable sleeping accommodations are also provided for employees for a nominal amount at their various lay-over points.

The working conditions and surroundings of our employees are made as agreeable and sanitary as it is possible to make them.

#### New Jersey Zinc Company, Palmerton, Pa.

The company has its own hospital, a delightful little building, in which there is an adequate dispensary, an outpatient department, and beds for thirty-two patients. The Palmerton Neighborhood house is a large two-story building that answers as a club house for the company's employees, and here school is conducted for employees of foreign birth. Some of the best work the company does is in the homes of its foreign-born employees, and a settlement worker is employed who speaks the foreign languages of those who work for the company, and who helps to improve the living conditions in the homes. She has grown to be a part of the life of the community. The town of

<sup>1</sup>It will be seen from the data furnished that the company is deeply concerned for the welfare of its employees. The pamphlets about which President Ripley writes are veritable treatises on their respective phases of welfare work.—EDITOR.

Palmerton has been built by the company in the course of the past fifteen years, and it has many attractive homes, a park, electric lights, modern sewerage system, a bank, the hospital and several churches, besides the schools for English as well as foreign children and for the grown employees of foreign birth. There is a kindergarten, at

the company says it is frequently asked whether the employees appreciate the immense amount of welfare work done for them. The company answers:

"If it is meant, do they come and present their thanks for what is offered to them, we would say, 'very seldom;' but if it is asked, do they take advantage of the opportunities offered, we answer, 'yes.'" The company asks other questions: "How many of the rest of us appreciated what our homes did for us when we were children? How many of us appreciated what the school and college did for us? How many of us now appreciate what is offered to us in public museums, public libraries, and the like?"



Fig. 1. New Jersey Zinc Company, Palmerton, N. J. Palmerton Hospital.

which those women who work and have no one with whom to leave their children can bring the little ones for the day's stay. They are fed and cared for, bathed, and have games and stories, and are taught by the object-lesson method. The neighborhood house was last year patronized by more than 14,000 grown-ups and children. There are a gymnasium, bowling alleys, billiard rooms, a music room, dramatic clubs for the different nationalities, a school for the mechanic arts, where the boys are taught carpentry, the mechanic's trade, and other useful manual arts. There are also cooking classes for boys and girls. The company maintains its own summer camp on Lake Mineola, eighteen miles from Palmerton, and the boys are grouped under the "Cooperative Boys" and the girls under the club name of "The Camp Fire Circles."

Safety devices are used in all parts of the factory, and employees are rewarded for suggestions for improvements, being paid for new devices.

A rather new feature at Palmerton consists of a large number of bungalows as homes for the lower-paid employees, who pay from \$7 to \$7.50 a month rent. All these houses are underdrained and have good sewerage. They consist of four rooms, a toilet, back and front porch, and a garden. In 1914 there were 190 contestants in the garden prize offer. Eighty percent of the gardens were shown by foreign employees, and six percent of the prizes offered were won by foreigners. The management of

comradeship and friendliness between fellow employees and also between officers and employees. This has helped us considerably in bringing our efficiency to a higher standard.

The society has in its employ 1,001 clerks, of which 302 are women. These clerks are divided into classes, each

#### Equitable Life Assurance Company, New York City

For efficient and faithful service it is the practice of the Equitable to give fair compensation. In addition, provision has been made for old age and disability, for life insurance, and for the general welfare of employees. Permanency of employment is encouraged and the spirit of satisfaction fostered. There is a cordial spirit existing which brings out forcefully the fact that there is no such thing as a boss, but on the contrary, a feeling of



Fig. 2. New Jersey Zinc Company, Palmerton, N. J. Foreigners' English class in the Palmerton Neighborhood House.

desk working under special classification. There are 112 boys, 264 junior clerks, 300 senior clerks, 203 special clerks, 87 technical and supervisory clerks, and 35 officers, junior officers, and superintendents.



The question of recreation and the promotion of sociability receives continuous consideration, and opportunities for enjoyment through athletic activities, outings, and theatrical entertainments are carried on throughout the year. A committee known as the Sunshine Committee renders aid and conveys sympathy, and endeavors to uplift those who are stricken with illness or misfortune. The society has been active in the organization of various clubs to promote sociability. It has a fife, drum, and bugle corps, consisting of sixty members, a band and a "boosters" club, an Equitable women's club, and a rifle club. Light, air, and ventilation are continually looked after, and regulated as far as possible. The clerks have also established a credit union in order to promote thrift. This union is composed of over 350 members, and is conducted under the banking laws.

In December, 1912, the board of directors put into effect a plan of caring for superannuated or permanently disabled employees and established a reserve force for the

library has been installed for the use of employees. The society also has an insurance library open to employees for reference purposes.

Vacations of twelve working days are allowed employees who have been in the service one year or longer, and additional vacation is granted for service of fifteen years or longer. This vacation is not limited to the summer months, but may be taken any time during the year. Portions of vacations may also be accumulated.

A welfare committee consisting of seven members, three of who are appointed and three elected by the clerks, and one ex-officio member, studies and makes recommendations on all matters having to do with welfare affairs. The employees are expected to support by their conduct and influence the efforts of the officers to secure orderly, economical, and efficient administration.

The company says: "The Equitable is a public service institution, and its spirit should be expressed in cooperation and courtesy. The good-will and friendship of those who transact business with us are won or lost by the treatment they receive. Cheerful cooperation on the part of each employee, together with businesslike deportment and appearance, is essential to this end. The obligation of the officers and directors to the policyholders is of necessity shared by every employee, and our employees appreciate heartily all our efforts to provide for their physical, mental and moral welfare."

At the convention of Agency Clubs, held at Cape May in September, 1914, the Equitable Veteran Legion was founded. The Legion consists of all loyal representatives of the society in the field and at the home office who have been associated with the Equitable in continuous service, in any capacity, for a period of five years or longer. The Legion is comprised of a series of divisions as follows: associate members (to be called "associates"), who have been in continuous service for five years and any additional period of less

than ten years, and who shall form the five-year corps of the Legion; full members (to be called "members"), of the following nine grades: the ten-, fifteen-, twenty-, twenty-five-, thirty-, thirty-five-, forty-, forty-five-, and fifty-year corps. The Legion has a membership of 2,300.

#### Illinois Steel Company, Joliet, Ill.

BY H. B. SMITH, Safety Inspector.

With the hope that many lives may be saved and much pain and suffering prevented, the following plan of education was devised and successfully operated:

In April and May, 1913, the Chicago & Joliet Electric Railway Company and the Illinois Steel Company arranged with the heads of the city and parochial schools for a series of talks on safety, with motion pictures and lantern slides. These lectures were given at the Steel Works Club, in a room which seated 400 children, and, in order to take care of the 7,700 school children in Joliet, these talks were repeated each school day for a period of six weeks. Later these lectures were held in the Princess Theater, a motion picture house, which was donated



Fig. 1. Equitable Life Assurance Company, New York. Vice-president Lunger presenting prizes at an outing of the employees.

purpose. It has also provided for free insurance to all clerks who have been in the society's employ for one year or more.

Adequate provision has been made and is effective for employees overtaken by illness or other temporary disability. A short working day is maintained, and employees working overtime when occasion requires are compensated. Employees having perfect records for promptness and regularity during three successive months are granted one day's leave of absence, and employees having perfect records of punctuality and attendance during any twelve consecutive months receive an honor certificate.

A well-equipped dispensary and an infirmary for employees are maintained, with a graduate nurse in charge. A house physician is also continuously in attendance during business hours. There are about 3,600 treatments given each year, and, in addition, a periodical health examination of each employee is made and records thereof maintained. Filtered drinking water and individual cups are supplied. Analytical tests are made from time to time in order to insure purity.

A circulating branch of the New York City Public Li-

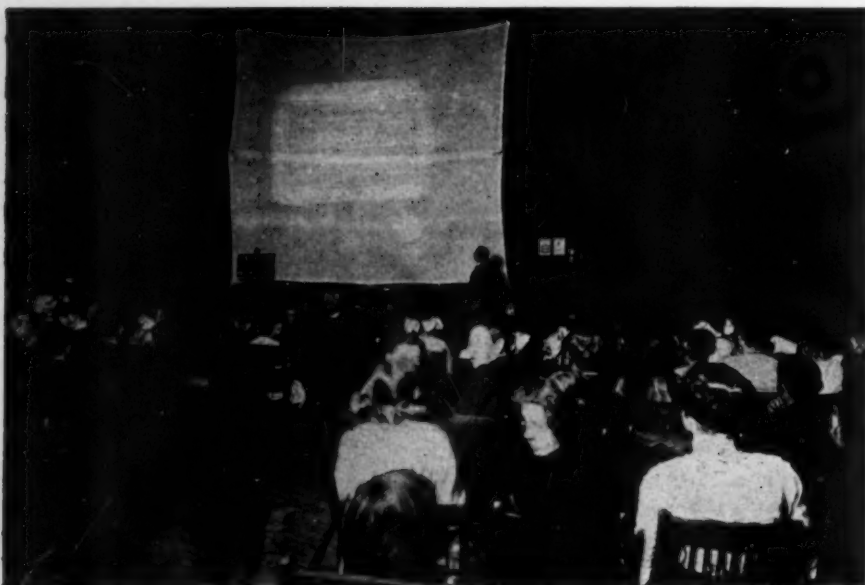


Fig. 1. Illinois Steel Company, Joliet. Children attending an illustrated lecture on "safety first."

by Mr. L. M. Reubens, manager, for this purpose. This theater is the newest and safest in the city, and has a seating capacity of 1,000. These lectures began on April 14 and continued until April 24, being delivered every morning from 10:30 until 11:30, excepting Saturdays and Sundays. In order to complete this work in two weeks, it was necessary to take care of the children in Lockport. Ward's Theater was donated by Mr. Ward for these talks, which were given twice each day for two days, about 550 children attending.

Two motion pictures were used. One was "An American in the Making," which took a young foreigner through the works of the Illinois Steel Company at Gary, exhibiting in detail the care exercised by the company in instructing the new man in regard to the hazards and also showing the protective appliances in place. The subject of the other picture was "The Price of Thoughtlessness," giving many incidents of street car accidents by playing on the streets where there are street car tracks, and also showing the children being instructed in the school room in accident prevention. Each day one of the men from the Illinois Steel Company was taken to the Princess Theater, where he put on one of the Draeger helmets, which the company provides for the men working in gases, ammonia fumes, etc., and the use and manner of using it was explained to the children. About forty slides were used to illustrate the methods employed by the company to interest the men in the "safety first" idea. These pictures illustrated the danger of walking on railroad tracks, and presented statistics of accidents caused by this practice. They also showed how the want of care on the part of persons having charge of motor-driven and horse-driven conveyances resulted in accidents with street cars. Views of the inside and outside of the Steel Works Club were also given.

Many letters were received from the schools thanking the steel company, street car company, and Mr. Reubens for the entertainment. The street car company used from four to eight cars each day to carry the children to and from the lectures, and the total attendance was 8,792.

#### Shredded Wheat Company, Niagara Falls, N. Y.

The Shredded Wheat Company, of Niagara Falls, has applied nearly all its welfare work in the direction of prevention and prophylaxis. Beginning with a wonderful building operated almost entirely by electricity, and ending with the welfare of employees, everything is directed toward convenience of operation, good hygiene, and sanitation and cleanliness. The company conducts an a la carte restaurant, in which all the women employees are the guests of the company—that is, the midday meal is entirely free to employees. There is a wide choice of foods, but the menu is made up with a view to wholesomeness and nutrition as well as to palatability. There is an auditorium for lectures and dancing parties, rest rooms, and just off these rest rooms



Fig. 1. Shredded Wheat Company, Niagara Falls. Dining room where employees are served meals as the company's guests.



Fig. 2. Shredded Wheat Company, Niagara Falls. Women's sunlit rest room.

is a small hospital and an emergency equipment. There are shower, needle, and tub baths, to which the employees have access at all recreational hours, and, as there are forenoon and afternoon rest periods of fifteen minutes and a longer lunch time, there is ample opportunity for employees to indulge their delight in the baths.

There is a corps of emergency nurses, and this paid corps is augmented materially by volunteers from among the employees of the company, who are given professional instruction in the principles and practice of first aid.



There is a choral society, with a membership of more than one hundred, which holds weekly meetings for rehearsal. The time of these rehearsals is paid for by the company, as it is taken out of the working hours. Profes-

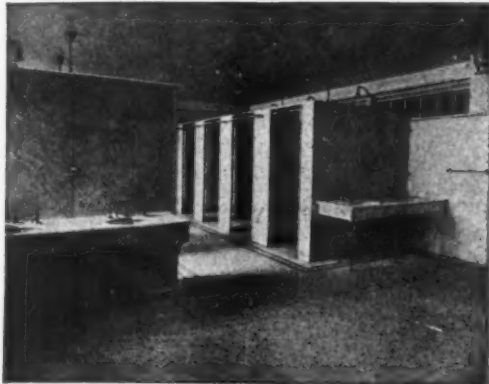


Fig. 3. Shredded Wheat Company, Niagara Falls. One of the marble lavatories.

sional music teachers are employed, also dancing teachers, and there is a band which also employs a professional master, and those of the employees who develop a taste for instrumentation are given an education in that direction.

#### National Lamp Works, Cleveland, Ohio

The National Lamp Works, a subsidiary corporation of the General Electric Company, has fourteen branches in as many cities. Mr. E. S. Brittin, of the Cleveland branch, has been the guiding spirit in the creation of the welfare activities of the corporation, but, as each branch must stand on its own bottom in regard to its earning capacity, so the superintendent of each branch has the option of accepting or rejecting any of Mr. Brittin's proposals in regard to welfare service. Some branches have put in just what the Cleveland branch has, and some have omitted one or more features. In the Cleveland factory is a social secretary, located in a large room near the employees' entrance of the building, through which employees must all go to their work. Beyond this room are lockers for the women employees, who make up two-thirds of the total number, and after leaving their wraps in their lockers the employees go to their several working stations. A prominent feature of the welfare service is enacted just at this point—the social secretary sees the employees as they enter the building, and it is her duty to observe each one as to whether she seems to be mentally and physically fit for work. She does not communicate with the employees as they pass in, but, if one appears to be ill or unhappy, she is sent for by the social secretary and an inquiry is made as to her trouble. If necessary, the social secretary, or one of her assistants, visits the home and tries to remedy the trouble, and does whatever is necessary to be done to that end. If one of the girls is tardy, nothing is said about it; if she is tardy twice at short intervals, a note is made of it, and, if she is tardy three times, the social secretary makes an inquiry as to the cause. Only recently one of the girls, repeatedly tardy, reluctantly admitted that her mother was ill, and that she, the employee, had gotten breakfast, had prepared the smaller children for school, had done nursing and home care of the sick mother, and had then come to her work. The mother, it was found, was very ill, and the girl had repeatedly been up with her at night. In this case the company took over the nursing of the sick mother and sent help into the home.

A very prominent feature of the National Lamp Works' welfare is its luncheon service, and elaborate figures have been made by Mr. Brittin, published in booklet form, showing the cost of the installation of the cafeteria, service rooms, and the kitchens, including lunches, counters, tables, furniture, trays, dishes, napery, and silverware, based on a unit of 300 employees, 225 of whom are women and 75 men. It was found that 80 percent of all employees use the lunch room, service room, and rest room. The total equipment for these 300 people cost \$4,180.27, and the booklet divides these expenditures into various items in a most illuminating way. There is a dispensary, a hospital unit, dressing room, and complete equipment and accessories. Mr. Brittin has designed what might be called a "knock-down cafeteria counter," which can be set up quickly and conveniently in almost any shaped room in an area of almost any size. The counter is made in sections, and as many sections as are needed can be used, and there are corner connections that can be fitted as desired.

There is a competent dietitian employed by the corporation, whose duty it is to prescribe proper menus and to see that the food is properly prepared and invitingly served. It is this company that has undertaken to direct the food choices of its employees by lowering the price of those articles believed to be most desirable as a midday lunch for young women, and by raising the price on those articles that young women oftentimes most want, but that are not the best for them; as, for instance, 2 cents is the charge for a glass of certified sweet milk, while 6 cents is the handicap placed on a cup of coffee.

The company makes a prominent feature of its first aid work and dispensary service, and maintains an efficient force of nurses and doctors. Lectures and demonstrations of first aid service are given under the direction of Dr. W. A. Haldy, the company's physician and an admirable booklet is published by the company for distribution to employees and to others interested, giving the cause, symptoms, and treatment of the majority of diseases to which working people are liable. This pamphlet contains many illustrations showing how to place various bandages and how to do the various dressings. It also goes into the mysteries of antiseptics, the infection of wounds, poisons and their antidotes, and has a noteworthy chapter on tuberculosis, its causes, its avenues of communication, and its treatment. This booklet also has a chapter on the items and cost of the equipment of the dispensary, dressing and auxiliary rooms, cost of the instruments, medicines, and dressings, and gives illustrations of well-equipped rooms of the sort.

#### Lowe Brothers Company, Dayton, Ohio

Special attention has been given to provide ample light for all the buildings occupied by the company. The old buildings are made as bright as possible, in addition to the light supplied by the large windows, by painting the inside in white; while the new buildings are of the large window type.

Lockers are supplied for all employees in the factory. Commodious wash rooms are provided, and particular care is taken to protect the men who work in the paintmaking departments. It is the duty of a special janitor to maintain a perfect sanitary condition.

In order to protect employees from possible disease from working in dry lead, they are provided with efficient respirators, and as a result practically no cases of occupational disease have occurred.

A lunch room for the women employees is provided, with tables, clean tablecloths, and all the necessary equipment. Hot coffee or tea is supplied to all employees. The women have a club, the High Standard Club, organized for literary and educational purposes. It is a member of the city, state, and general federations of women's clubs. The meetings are held in the club room on the second and fourth Wednesdays of each month from 12 to 1 o'clock.

The relief association has been in existence for nearly sixteen years, and is conducted entirely by the employees. Membership is voluntary, and nearly all the employees are members. Regular payments are made for sickness. At the organization of the association the company contributed \$100 to the treasury as a foundation. The association now has about 110 members, and has over \$500 in its treasury. No effort is made to accumulate a large amount, and when the treasury has more money than is considered necessary as a reserve, the dues are omitted so that the excess may be reduced. Annual summer outings are provided by the company on one day of each year, in which all employees and their families participate.

It is a rule of the company to pay the highest wages possible for the work done. Six years ago, by the will of the former president, a profit-sharing arrangement was inaugurated, which provided that for ten years the dividends from the president's holdings in the company were to be divided periodically among all employees on a certain basis of division, which has resulted in an addition of an appreciable amount to the income of each employee.

#### American Blower Company, Detroit, Mich.

This company manufactures heating apparatus, ventilating plants, ice fans, and blowers. It conducts a monthly periodical which it calls "Shop Talks," a newsy little four-page publication, with a little gossip of the factory and its people, and a good deal of valuable material in the shape of short talks on the company's business and methods and efficiency, and employees contribute to this little monthly periodical. The company has its own hospital, dispensary, and out-patient department; it has visiting nursing, inspires thrift in its employees to the extent of a savings system; has sick, disability, and death benefits, and a pension provision. A unique feature of this company's policy is indicated by the following recently promulgated bulletin:

From and after this date promotions to positions of importance in the organization of this company will be given only to those who are native-born or naturalized citizens of the United States, or to those of foreign birth who have relinquished their foreign citizenship, and who have filed with our Government their first papers applying for citizenship, which application for citizenship must be diligently followed to completion.

Employees of foreign birth who retain their foreign citizenship will not be discriminated against in their present positions or work, but they will not be promoted to positions of responsibility and trust.

A prerequisite to employment by this company must be loyalty to our Government and our flag in addition to loyalty to the company itself.

The factory management is authorized to make this order effective immediately.

#### Michigan Stove Company, Detroit, Mich.

DATA FURNISHED BY MR. H. B. GILLESPIE, Vice-President.

The welfare work that we do is largely the evolution of forty years of continuous stovemaking, during which period we have come in very close personal contact with our employees, and have been enabled to study their requirements and necessities, and to provide, to the extent of our ability, such helps and assistances as are most urgent.

In addition to maintaining a thoroughly modernized and, as far as possible, sanitary plant, with all of the conveniences that we have thought it necessary for our men to have, such as dressing rooms, toilet facilities, shower baths, etc., we subscribe largely to an employees' mutual benefit association, which, for a small weekly contribution, provides members with incomes during periods of incapacity due to sickness, etc. We have found that this mutual benefit association has provided means to help the family of the employee tide over difficult periods when the head of the house was ill, and that the association has, therefore, been a most beneficent one. We also carry under the group plan a life insurance policy for each employee in our works at our own expense. When a man accepts employment with us, he automatically becomes insured under this plan. The policy for unmarried men is \$250 and for married men \$500. We have found in a number of cases where deaths have occurred that the insurance payment was the only money that was available in the family to defray funeral expenses, etc.

Our superintendents do a certain amount of welfare work in the works of which no record is made, but all of which is more or less altruistic and beneficial.

#### Ludlow Manufacturing Company, Boston, Mass.

This company manufactures jute and linen carpet, yarns, bagging, hemp and twines. It does not conduct its own hospital, but has built and presented an excellent little hospital to the town of Ludlow, and it meets all expenses incident to the care of the people of the town, most of whom are employed by the company. It has a village club house, in which there is an assembly hall, a gymnasium, bowling alleys, swimming pool, reading, card, and smoking rooms, ladies' parlor, six rooms for classes in cooking, sewing, laundry, etc., and rooms for private club meetings. Nearby is the athletic park for outdoor sports, and children's recreation classes. There are two village schools and a large, handsome high school for the children of employees, and the company builds and owns its employees' homes, keeps them in good sanitary and hygienic condition, and rents them to employees at a low rate, running from \$1.80 per week up to \$3.85, this latter for an eight-room, single-family, two-story, well-made frame building, with porches, garden, good sewerage, and all modern conveniences. The company has its benefit association and savings organization and a pension fund.

#### Cincinnati Milling Company, Cincinnati, Ohio

This company conducts a first aid hospital in the factory, with Dr. Otto P. Geier, chief physician, in constant attendance during the working hours. The company also employs nurses in the plant hospital and dispensary, who do out-patient visiting. While this bare statement seems to imply little, Dr. Geier has made a special study of industrial welfare work, and the quality of the work he is doing cannot be explained under simple headings.

#### United States Playing Card Company, Cincinnati, Ohio

This company employs approximately 2,000 people, and conducts an excellent restaurant, which seats at one time 1,100. There are rest rooms for the women, with a nurse in charge, a first aid hospital and dispensary, and the nurses employ part of their time in visiting in the homes of sick employees or of those who have sickness in their families.



# CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,  
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**Hospital Development in Germany from 1888-1913** (Fortschritte des Krankenhauswesens in den Jahren 1888-1913). Dr. Grober. Fortschritte d. Hygiene, hrsg. von S. N. Kreiss, Berlin, 1915.

In the eighties of the last century hospitals were still largely considered charitable institutions. The nurses possessed little professional education, the buildings were insufficient and often overcrowded, and the hygienic conditions left much to be desired.

Among the causes of the great progress in hospital development during the last twenty-five years must first be mentioned the long period of peace which the country enjoyed and the enormous increase of the wealth of the German people. Social insurance, benefiting all classes of the working people, was also an important factor in the advancement of modern hospital conditions. The various great workingmen's organizations can spend much larger sums than could possibly be done by individuals. Almost one-half of the hospital patients are members of these financially strong organizations.

Today the people are no longer afraid of the hospitals, as was the case in former times. They are so used to the hospital that the well-to-do families regularly send their sick members, in certain diseases, as scarlatina, typhoid, diphtheria, etc., to the hospital. This great confidence of the people in its hospitals extends to all classes, to rich and poor, and is principally due to the efficiency and splendid results of the modern hospitals. That the remarkable progress of modern medicine had much to do with the great hospital development of our times cannot be denied.

The progress in German hospital conditions shows itself in the great increase of the number of hospitals. In 1877 Prussia had only 888 hospitals, in 1910 she had 2,314. In 1877 the number of beds in the hospitals of Prussia amounted to 37,039, in 1910 it had increased to 160,434. The number of patients treated in hospitals amounted in 1877 to 211,060, in 1910 they numbered 1,304,641.

During the last few years a great number of small hospitals have been established by the smaller towns, but, with the exception of a few of the larger cities, like Berlin, Hamburg, and Vienna, where overcrowding has lately become chronic, patients are better cared for in the hospitals of the large cities than in country hospitals.

During the last quarter of a century great changes have taken place in the care of the insane. The old insane asylums have become real hospitals. The patients are no longer kept as dangerous prisoners behind barred windows, but are treated humanely under an enlightened and trained personnel. This has had a very favorable influence on the course of the disease, and the institutions have gained the confidence of the people.

As great as has been the progress in hospital develop-

ment during the last twenty-five years, further improvement is necessary and new problems remain to be solved. The number of hospitals, general as well as special, must be increased, and a continuous healthy progress in all lines of hospital life must be kept up, for standing still would mean retrogression.

**Resuscitation Apparatus.** Yandell Henderson, Ph. D. Jour. Am. Med. Assn., 1916, LXVII, No. 1.

The old type of pulmotor is found to furnish a mixture of 28 to 30 percent oxygen, and, as pure air contains 20 percent, the oxygen enrichment is not considerable. The main purpose of the compressed oxygen really is to supply the motive power, while compressed air would be equally effective for this purpose, the author claims, under favorable conditions. A marked improvement is the new pulmotor, model B, and several other types of resuscitation apparatus are discussed, such as the lungmotor, life motor, and vivator. The conclusions reached are:

1. Universal training in the prone pressure manual method of artificial respiration will accomplish more for resuscitation from drowning, electric shock, and asphyxia than is possible by providing any amount of apparatus.

2. Artificial respiration with apparatus is superior to the manual method in that the apparatus is capable of giving a normal volume of pulmonary ventilation, while the manual method is not.

3. Nevertheless the immediate application of a poor method is far more important than the application of a perfect method after a delay of even five minutes. The knowledge that apparatus is available is liable to result in a neglect of immediate manual treatment in order to have the apparatus brought from a distance.

4. Apparatus should be provided only in places in which it will be immediately available.

5. Since all that any apparatus yet invented affords is artificial respiration, with air more or less enriched with oxygen, it should be of a simple type, so as not to produce exaggerated ideas of its efficiency.

6. Oxygen inhalation should be used immediately in gas and smoke cases, but the apparatus employed should be such as will allow the oxygen to reach the patient's lungs in efficient concentration. Such apparatus should go with every artificial respiration device.

7. Investigation of the use of artificial respiration apparatus in asphyxia neonatorum is needed.

**Hospitalization of Prisoners of War Needing Climatic Treatment** (Hospitalisierung kurbedürftiger Kriegsgefangener). Der Bund, Berne, 1916, May 4.

By the intercession of the American ambassadors in London and Berlin, the hospitalization of sick and wounded prisoners of war in Swiss health resorts has now also been extended the British and German prisoners of war. Swiss army surgeons will visit the prison camps in Germany and England, and select those prisoners who are in need of climatic treatment. At present there are now about 12,000 sick and wounded French and German prisoners of war at the various health resorts of Switzerland.

There is no animosity between these men who once faced each other as enemies on the field of battle. This is shown by an incident that occurred at the Union Depot at Berne, where a French train with German exchange prisoners met a train coming from Germany with French prisoners of war. The former enemies, officers and men, chatted pleasantly together. There was much laughing

and joking. "For us the war is over!" called out a young German in French when the trains parted. "Let us be friends!" was the answer from the French train, and "Au revoir!" came from a hundred voices, with waving of handkerchiefs from the parting trains. Brave men know no hatred; songs of hate are made by those who are at a safe distance from the storm of battle.

**Frozen and Dried Eggs.** Ed. Am. Food Jour., 1916, XI, No. 5.

The frozen and dried egg industry, declares a new publication of the Department of Agriculture, is a permanent one because it meets a distinct economic need. Many eggs which could not stand long shipments may be preserved as wholesome food by freezing them, out of the shell, or by drying. Some of the results of this study have just been published in a professional paper, Bulletin No. 224, "A Study of the Preparation of Frozen and Dried Eggs in the Producing Section." The eggs commonly used by reputable firms for baking are small or oversized eggs, and dirty, cracked, or shrunken eggs. To the trade these are known as "seconds." They are not to be confused with eggs that are unfit for human use, such as the classes known as black, white, mixed, and sour rots, green whites, eggs with stuck yolks, musty and moldy eggs, blood rings, etc. These should be rejected entirely or else used for tanning purposes only. Eggs with a bad odor should be rejected absolutely. Careful candling before the eggs go to the breaking room is one of the principal points on the importance of which the new bulletin insists. The bulletin also discusses in some detail the measures necessary to secure cleanliness in egg-breaking establishments.

**History of the Care of the Insane in Denmark** (Sindssygevaesenets udvikling i Danmark). H. Helweg. 8vo. Kobenhavn, 1916.

The first institution for the care of the insane in Denmark was established in 1632 by the city of Copenhagen. This was the beginning of the great St. John's Hospital, which was later removed to Bistrup. During the eighteenth century several smaller cities founded modest establishments for the insane. The first state hospital for the insane was established in 1852, which was the Aarhus Asylum, and owes its existence to the untiring efforts of Dr. Selmers. Among the men who did much for the hospitalization of the insane the author mentions Peter Jensen and Waldemar Steenberg. Jensen was director of Oringe Hospital, which was opened only five years after the Aarhus establishment. He was the first to give the patients greater freedom and to promote colony and family care. Steenberg was at the head of the St. John's Hospital for thirty years—until 1892—and did much for the advancement of this great institution.

**Operating Room Illumination.** Ed. Jour. State Med. Assn., 1916, IX, No. 5.

The author discourages pure white illumination, and especially glazed surfaces. It is unnecessary to go to the extremes in adopting black sheets, gowns, etc., because of the necessity for increased illumination. There are, however, some of the soft shades of gray which are restful to the eyes, while at the same time giving an appearance of cleanliness and interfering but little with illumination. An operating room with walls, ceiling, and floor in a soft tint of gray, and in the flat or dull finish, so as to avoid reflection, makes an ideal color scheme which does not tire the eyes, and is all that could be desired from an esthetic point

of view. It should be remembered that the question of illumination has much to do with comfort for the eyes of those who are obliged to be in operating rooms for a considerable length of time. Too much illumination is just as bad as too little. Theoretically, it is far better to have less light and have it properly directed and subdued than to be annoyed by the discomforts from undue brilliancy. Brilliancy of illumination does not mean possibilities for better work, but it does mean discomfort for the operator.

**Care of Blind Soldiers in Milan** (Assistenza ai soldati ciechi in Milano). Rassegna sanitaria, Milano, 1916, XIV, No. 4.

It is one of the peculiarities of this war that a comparatively large number of soldiers are rendered permanently blind from the explosion of projectiles. All the belligerent nations had to make special provisions for the reeducation of these unfortunate men. The Institute for the Blind in Milan has established a special division for blind soldiers. All are first taught to read by the Braille system. Each one is then permitted to select a trade, in which he receives careful instruction. Typewriting, shoe-making, joining, modeling, and massaging are among the trades taught. To furnish the poor men some distraction, the people of the city have sent a great number of canaries, mocking birds, and other song birds to the institution, and each man takes great pride in taking care of one of these little songsters.

**Social Service at the Massachusetts General Hospital.** Ed. Boston Med. and Surg. Jour., 1916, CLXXIV, No. 22.

The social service department of the Massachusetts General Hospital is concerned largely with the consideration of the question, "What shall be the attitude of the department toward the increased amount of work which it is called on to do?" The number of patients who can be treated properly in a day is limited, and the limit has now been reached. The excessive demand for social service is due partly to the lack of local organizations in smaller cities and towns, but chiefly to general economic conditions. Social workers see their patients as "accumulated evidence of the background from which they come—from the crowded tenements and straining industries, from the crowded streets and oppressing ignorance which surrounds them." The department very wisely decides to maintain the quality of work, and to treat fewer patients well rather than more patients poorly. During the year 1915 the social service department cared for 2,355 new patients and 652 carried over from previous years.

**The American Hospital in Munich.** Sonntagsbl. d. N. Y. Staats-Ztg., May 21, 1916.

This hospital was established shortly after the beginning of the war by the American colony in Munich, but it is especially due to the untiring efforts of Dr. Sophie Nordhoff-Jung, of Washington, D. C., the superintendent of the institution, that the hospital maintains its high reputation for efficiency and successful management. So great was the confidence placed in the American hospital that, when the first blinded soldiers arrived in Munich, they were turned over to this hospital, as it was thought that the pleasant surroundings prevailing in this institution would be best suited for these patients. The hospital received considerable assistance from the American Red Cross, but it is especially due to the efforts of Mr. Semler, of New York, that the hospital was able to defray its expenses. Mr. Semler, returning to the United States,



formed a committee, of which Mrs. Benjamin Harrison and Mr. Henry A. Garfield, son of the former president, are members. Up to last April over \$50,000 was collected for the institution, and it is hoped that the hospital will be able to continue its splendid humanitarian work.

**The Business of a Modern Hospital.** Dr. F. Baker. Trained Nurse and Hosp. Rev., New York, 1916, LVI, No. 5.

All the branches of the business of a modern hospital are in close relation to each other, but all are dominated by the element of safety first. Safety of the patient is the paramount and guiding principle. If the business of a hospital does not bring desirable returns, it is usually due to a faulty organization. The organization should be in direct control of the executive, for without it the latter cannot be held responsible for poor results. It should be a governing principle of the management to receive suggestions from any employee, patient, benefactor of the hospital, or from anyone interested in suffering humanity, for such persons are frequently better able to judge about certain needs than the manager himself. Economy means the greatest possible service for the least expenditure of cash, but it would be a great fallacy to make cheapness the guiding principle. The article is accompanied by an ingenious diagram showing the interrelation of the various branches of hospital management.

**The Location of Hospitals.** Ed. South. Med. Jour., 1916, IX, No. 5.

Very frequently, when it is proposed to erect a sanatorium or hospital in a small city or town, the owners of property near by or adjacent to the locality selected energetically object because of a mistaken idea that it will endanger the health of people living near to the proposed institution. With the possible exception of a smallpox hospital, there is not the slightest danger of any disease being disseminated from a decently managed hospital or sanatorium. The real reason for opposition to the location of a sanatorium or hospital in the residence part of a town is the fear that possible purchasers of real estate may be repelled by its proximity and refuse to buy, thus lowering the money value of such adjoining property. Generally the objections are entirely speculative, and do no honor to the objectors and often discourage worthy projects.

**What Constitutes the Ideal Method for the Admission of Mental Patients to State Institutions.** Edgar T. Braunlin, M. D. Ohio State Med. Jour., 1915, May 15.

The laws of the states present a chaos, each one of the forty-eight states having its separate code governing the commitment of the insane. It is a known fact that the legal aspect of the insane reflects with marked reliability the status of public care of the insane in any given state. Provision should be made for proper temporary care for insane patients until they can be legally committed to state institutions. Probably the ideal method of detention is in a psychopathic hospital, such as is maintained in several states, the hospitals to be connected along the lines of general hospitals "for the study and treatment of patients and for scientific research." This need cannot be emphasized too strongly if its value were even only to distinguish the border-line cases. Last, but not least, there should be more cooperation between the family physician and the hospital physician, especially as regards the medical certificate. Complete and thorough histories are needed

for scientific research in the correlation of social disorders and mental disorders.

**Adequate Institutional Care of the Tubercular.** Philip H. Pierson, M. D. California State Jour. of Med., 1916, XIV, No. 5.

The object to be gained is (1) to take care of the cases which are tubercular, and (2) to prevent others from becoming infected. If tuberculosis of today is properly taken care of, prevention of tomorrow will receive its greatest help. Tuberculosis needs institutional care for part of its course if taken early. Adequate institutional care, then, means sufficient beds to care for the cure or arrest of incipient and favorable cases. The economic loss caused by 500 consumptives, according to Locke and Floyd is: first, \$426,039 loss in wages due to complete disability; second, \$73,984 expense to state for care and not including construction and depreciation of institutions. A central examining board through which all sanatorium cases must pass, and to also have charge of patients while in sanatoriums, would result in more intensive treatment and better general results.

**The Institutional Treatment of Consumption.** Ed. The Hospital (London), 1916, LX, No. 1560.

In considering the institutional treatment for tuberculosis, it is necessary to differentiate strictly between sanatorium and hospital cases. The former class of patients should include certain amenable types, or, at least, cases where the lesion can be brought to a state of quiescence and likely to be of some duration. The "hospital" cases should be (1) acutely ill cases of apparent recent origin, (2) those that are worth patching up, but that are unlikely to have their disease arrested for any considerable length of time, (3) patients whom it is desirable to teach how to live so as to be in the least degree dangerous to others, and (4) those who can be persuaded, in default of compulsory powers, to submit to segregation for prophylactic reasons and for the benefit of the community, even if only temporary. Segregation of advanced cases is a necessary factor because of the psychical effect of convalescent and moderate cases.

**What Is Meant by Hospital Efficiency and Some of the Factors Which Are Often Responsible for Lack of Efficiency.** Winford H. Smith. Trained Nurse, 1916, LVII, No. 1.

Efficiency is at present a misused term, and has been abused in the same manner as the overworked word sanitary. Hospital efficiency has been measured in devious ways—i. e., per capita cost, patients treated, operations performed, average length of stay in the hospital, mortality rate, research work accomplished, etc. Any one of these may be a factor in or the result of, but not the measure of, efficiency. The thoroughness and completeness with which work is done should be the gauge of hospital efficiency rather than, or as well as, the ratio of production to energy expended. Organization, first and last, is the most important factor. A trained medical administrator is preferable because of his broader point of view. He should be a director who harmonizes and coordinates, but not a dictator.

Fifty thousand dollars have been collected and an additional \$50,000 subscribed toward a fund of \$400,000 which the directors of the Har Moriah Hospital, New York city, hope to raise for the erection of an entire new plant.

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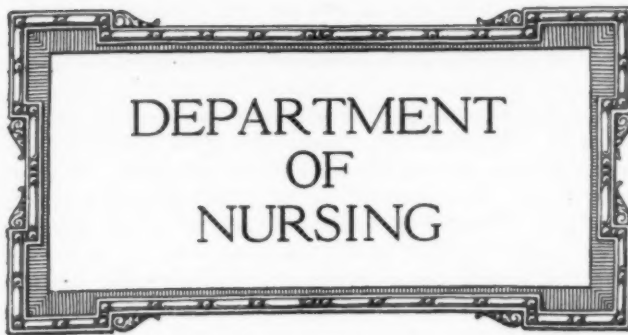
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Miss Mae Simms, superintendent of the Williams Hospital, Lebanon, Ind., is spending a vacation in California.





Conducted by MISS ANNIE W. GOODRICH,  
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Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

### The New Patriotism

Militarist or pacifist, whichever we may be, on one thing we shall be agreed today—namely, that physical fitness is a prerequisite for efficient citizenship, through whatever avenue the citizen may render his service. Furthermore, to the citizens of a democracy, or indeed to any intelligent person, the system no longer commends itself that concentrates its health efforts on a selected group whose ultimate end is to be sacrificed in the full bloom of a physically perfected manhood on the altar of the country, and neglects the great industrial army on which the country's prosperity, even its life, depends in times of peace and not less in times of war.

It is not strange, therefore, to find growing up side by side with the medical and nursing corps of the United States Army the corps of a nation-wide and now generally nation-supported health movement, whose increasingly comprehensive scope of work would indicate that its ultimate purpose was to provide through all possible means that every citizen should render to the country the most efficient service, extending over the greatest number of years, and with that joy of life and labor that is the priceless treasure of the physically fit. The economic soundness of this health movement, amply proved by the result of its various activities—milk stations, school medical inspection, social service departments in dispensaries and hospitals, etc.—has aroused the interest and enlisted the cooperation of many industrial corporations, and every year sees an increasing number of physicians and nurses installed in industrial plants.

To those sitting in the watch towers of the nursing profession the ever-increasing demands for nurses in the industrial field—themselves the working body in the new industry of health making—seem to bring closer and closer the realization of their most cherished dreams—the day when each child projected into the universe finds himself the citizen of a true democracy, a state whose paternalism is committed to the fullest protection and the development to its highest capacity of every human life, regardless of social and financial status; where the privileged class is the mentally and physically handicapped, and where the aristocracy is formed from the laborers who have rendered the most conspicuous public service.

Again, the watchers are concerned to note that not yet does the number of nurse teachers needed begin to meet the demand; not yet does any appreciable number of schools give an adequate preparation for this field; that as sanitarians, hygienists, and workers equipped to cope with the psychological and sociological aspects of its problems, the products of training schools are conspicu-

ously weak when they should be conspicuously strong. An aseptic conscience may be a prerequisite for a nurse, but not an aseptic mind.

The heavy hand of tradition still holds us in its clutches; we are still looking backward. Today in our greatest city an epidemic is demanding in the neighborhood of twenty potential industrial workers' lives daily, and is crippling, possibly for life, those of its victims that escape death. It is said that about 150 nurses and many physicians are needed. Over 200 nurses are waiting, pledged for from six months to two years, for a service that may be required of them through a possible war, or, more possible, epidemics likely to arise from a protracted residence on the Mexican border while awaiting the war. The inconsistent mountains have yet to be leveled, but those most keen to observe this, finding no way to encompass it, still obediently climb. Let us hope that the twenty-first volume of the march of civilization will record that the next generation caused some of its ranges to be removed.

ANNE W. GOODRICH,  
Teachers' College, Columbia University.

### What a Nurse Should Contribute to Team-Work<sup>1</sup>

BY ADELAIDE MARY WALSH, R. N.,

Director of the Social Service Department, Children's Memorial Hospital, Chicago; President of the Illinois State Board of Nurse Examiners.

Perhaps in intelligently considering this all-important subject of team-work it might be advisable to apply the magic word "cooperation," which fixes it definitely in our minds as a working basis for the problem. This is, after all, a simple and practical addition to an established condition. It means the coordination of every interest that points for results, and the ability to accomplish the greatest amount of good by being most effectively and efficiently employed; it means less loss of energy and more easily obtained results; it means a better knowledge of each one's sphere of activity, but it does not mean the losing of one's own identity. In other words, cooperation means to work together, and emphatically demonstrates the proper interpretation of practical team-work.

We might consider primarily what the nurse should be—a woman with a satisfactory idea of the practical element which enters into the profession of nursing; a woman with at least the educational equipment of one year of high school or its equivalent; a woman of good moral stamina, with standards so fixed in the practical development of her character that no ordinary temptation will break through this bulwark; a woman of suitable age, which is generally conceded to range between 20 and 30 years; a woman of tact and patience, sympathy and understanding; a woman whose desire to enter the nursing profession is not based on sentimentality, but who is able to withstand the distractions of life to such an extent that they will not interfere in the routine of her daily professional existence.

A woman who has pledged herself to spend two or three years of her life within the walls of an institution, learning work which will carry her far beyond these four walls, must have an earnestness and singleness of purpose which will conduct her far on the road of being of service to other people. She must never forget that what she does will reflect credit or bring criticism on the school which she represents; she will learn during the process of her education many phases of the human heart; she will have stood on the heights and will have descended to the depths,

<sup>1</sup>Read at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

but her experience will have meant much, not only in the development of her own character, but in making her helpful, useful, and the world better for her having been a part of it. A woman who has tried to see with the eyes of a patient who needs sympathy of viewpoint, a woman who has struggled very, very hard to understand the pain of the person she is trying to serve, surely such a woman must have been given a generosity of soul and an insight into other hearts which should make her well able to see just the weak places where her discipline of thought and her powers of observation could make her a valuable adviser and friend.

What is this woman when she enters the hospital, and what is she *not*? A woman and a nurse! What a wealth of gifts and importance of material are here! The asset of being a woman and thereby being able to give oneself with unstinted enthusiasm to the profession one has chosen! Of course every woman should not assume the responsibility of believing that she will be a good nurse. There is a great danger in supposing that training alone is all that is necessary to make one satisfactory in the performance of her professional duties. This training but directs one's natural powers in channels of other opportunities. As some one has said in relation to this subject, "the certificate will tell of the training, but a sick child will tell the rest." In brief, one who adopts this wonderful profession of vast possibilities for saving human life and of the alleviation of human suffering should be possessed of natural qualities to be able to understand and appreciate *people who are patients*. Individuals who are handicapped by the nervous strain of enduring physical pain, harassed by the thousands of cares which are magnified out of all proper proportion in their relation to life—these sick people will press their pangs on this kindly woman with a force that needs bring to the surface all of one's determination, discrimination, tact, and sympathy. That these same women must be possessed of natural kindness and an eagerness for service is a part of the character which should present her for a share in the blessings connected with the profession of nursing.

Some one once asked George Eliot what was the greatest lesson life had taught her, and her response was contained in one word, "tolerance." So the woman who spends certain years of her life trying to read and understand her patients might well allow that quality to hold an important place in the process of the development of her character. Women of integrity, women who possess their souls in peace, who allow the spiritual phase of their natures to be responsive to the influence of their work—such are the types of women we hope, expect, and need to see espousing this noble calling.

Frequently a nervous, earnest, well-meaning woman is plunged into a whirl of activity far removed from the general world in which she has had her experience. She is filled with enthusiasm, and anxious to do the best she can; she is sincere, and should be obedient; she is willing to a degree that on occasions seems unwise, for this great enthusiasm must be endured for a period of three years, and this high tension cannot and should not be maintained for that length of time.

One practical application for good team-work is the suggestion that a nurse should not grumble. When she is on an especially congenial service, if her patient is peculiarly dependent upon her, if she is deeply interested in perfecting the work of her ward, floor, diet kitchen, or dressing room, and when the order is received to report for duty in another part of the institution—this is a genuine hardship to a woman who is entirely wrapped up

in the work that each day and service develops. Occasionally she may justly feel that she has brought it to such a stage of efficiency that she believes her presence is almost needed to carry out her well-considered plans. If she will adjust her mind to the fact that she has done her part in bringing this work to a certain stage of excellency and will allow another student to finish her plans, and will go without a murmur to her next field of endeavor, she will have contributed a genuine piece of good, proficient team-work. On the other hand, she owes it to herself, her service, and her profession to pay as much attention to the detail of her every-day work as she possibly can give heed. If supplies are returned from the sterilizer, if the laundry is brought up at the last moment, if there are countless personal inconveniences present, they can be calmly and carefully taken care of with an equanimity of bearing and a poise of manner which will inspire confidence in subordinates and render much assistance to an institution which trains its students to consider the welfare and the comfort of sick people at all times. It is also necessary to bear in mind that the most intelligent woman is very often the one who is most inclined to adhere absolutely to the rules and regulations of her school. Promptness in reporting, courtesy to her superiors, kindness in instructing those beneath her, appreciation for instructions of the medical and surgical staff, should be observed. There is one more significant place where a nurse can maintain a situation and reduce the danger of poor cooperation to the minimum, and that is if she decides and adheres to her resolution of never being critical, either in her mind, in her attitude, or in her conversation. It is so very easy to decide what other people can do, and at times seemingly an impossibility to attend strictly to what seems to be one's own affairs. If a woman will remember that she cannot do a better service than by preserving peace, she will have indicated her caliber as a broad-gauge, highly trained professional woman. In a concise term, good team-work as contributed by a nurse really means correct attention to the ethical situation. If she will study this side of her professional life and carry out its requirements, she will find that, as far as she is concerned, she will have done her duty. This is not always an easy task, for the reason that individuality is hard to curb, and there do seem to be moments when institutions neglect to consider this all-important phase of people's development. Truly it seems possible to pay strict attention to the spirit as well as the letter of the laws as given in different institutions, and there is no woman in any training school who need fear that her cause and her right, and her ability to serve, will be challenged by high-minded correct individuals who have the responsibility for the proper, just, humane, intensive, and constructive development of the nurse as a student in the training school, who struggles to demonstrate her personal belief in and practice of good team-work. She is not a machine; she is not a person without human understanding; she is not capable of performing tasks and expending herself on duties to the detriment of her physical well-being for any length of time. This does not indicate that the well-trained student nurse is not more than willing to put her shoulder to the wheel at any price and in any emergency where her services are required.

What the nurse should do. She should have a wholesome and beneficial respect for all rules and regulations; she should appreciate in an intelligent way that routine, practically applied, is a support and not for a single instant a thing toward which her feelings should be antagonistic; she should care for her patients to the best



of her ability; she should follow instructions laid down by the director of her training school, and should be most careful that her work is her first thought at all times and under all conditions; she should remember that it is the patient first, last, and all the time. Her attitude to her fellow-nurses should be one of comradeship, friendship, and kindness, with ability to disregard the personal element which so often handicaps people who are doing any sort of institutional work. It should be the principle for which she is striving and not the individual that she serves. She should consider that, whether she likes her senior on the floor or in the ward, or whether she enjoys the supervision of her head nurse, or whether she has any special pleasure in having a certain group of interns on the service to which she is assigned for duty, or whether she is especially interested in the medical or surgical staff member who is responsible for the patients for whom she is caring, is immaterial. This does not in any way suggest that her mental attitude should be cold or mechanical, or not deeply and intensely centered in the work that she is performing, but it does very forcibly interpret the fact that she must remember at all times that her mission is to serve, and in the most comprehensive, devoted manner, and with the utmost skill that it is within her power to render. Her personal impressions should not be given too much consideration. She is there as a student in the great laboratory of human ills, and it is her business, and her best endeavor should be to conserve the health and well-being of the patients for whom she cares. A woman's sensitiveness of soul is so inclined to become involved in the fine points of her intuitive feelings that very often it takes a superhuman amount of courage and strength of will to place the work that she is doing outside of the boundaries of these peculiar limitations. Because an individual is a nurse means that she is a woman first plus this profession. She must for this very reason be very particular to keep all of this side of her nature subservient to the broader basis on which she is building her life.

In what type of institution does this above described woman find herself? Within the four walls of a hospital, where occasionally—we are happy to say, not frequently—she is obliged to work laboriously and nervously and mentally for from twelve to fourteen hours a day. Her living quarters are wretched; often she is obliged to share sleeping quarters with individuals who are, to qualify in the kindest way, "uncongenial." Her life lacks the privacy which is so much needed as a form of relaxation. Sometimes even the food that is served this enthusiastic, ambitious woman is of poor quality and is not well prepared. Nothing is done to contribute to her pleasure, and the last thing in the minds of the people in authority seems to be that this person who is caring for the sick within the walls of their institution needs pleasure, needs recreation, needs diversion. Frankly, there have been times and occasions when this profession of nursing has been put but one step removed from the occupation of being a mere drudge. The nurse has frequently been exploited as an individual who will do for the hospital the work for which servants should have been hired. Her opinion is never sought, and she is not in a position to volunteer very much information. She is receiving a minimum compensation for a maximum amount of labor. There are occasions when a woman in this type of institution becomes utterly and absolutely discouraged, and with good reason. She seems to feel that there is no redress; that she must continue this crucifying work to the end of the time allotted for the requirement of becoming a graduate

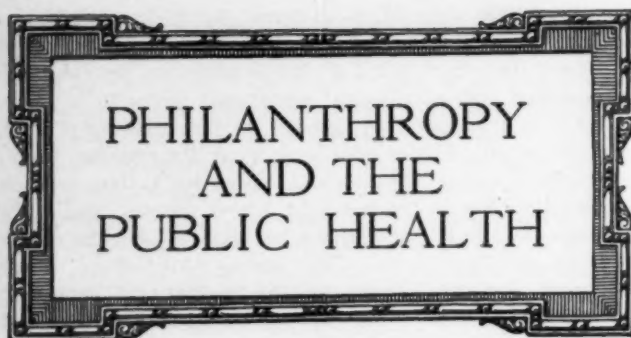
nurse. At the expiration of three years spent within an institution where the training has resembled that which has been described, her joy, her inspiration, her stimulus have faded and gone—alas! sometimes never to be found again! Within this type of institution her hours for study are almost nil. She attends lectures in the evening, taking notes with cramped fingers and aching head, tries to study while attending to the needs of a sick patient, and is not allowed the joy of contributing her part to even the mental activity of this work. She leaves this school poorly equipped, not at all ready for the professional opportunities which await every enterprising and enthusiastic woman, and, because of the low standard of her training school, unable even to register in the state in which the school is situated. Because this same hospital was a small institution, she has not had sufficient experience in the variety of diseases. She has had either too much special duty or too little. It was a surgical hospital, and she had only rare experience with medical or children's work, or, on the other hand, it might have been an institution which gave special attention to the obstetrical work, and for this reason she did not have experience in other lines of professional training.

Now, this seems a very black picture, and it is, we are happy to say, only on rare occasions that the profession of nursing is regarded in so undignified a light, but, still, it is a warning, and we believe that such types of institutions still exist. How interesting it is to contrast this with the training schools in the community where there is nothing thought too good for the nurses who are receiving their professional training under its guidance. The students have the best advantages that it is within the powers of the training school authorities to secure. Frequently they graduate as students of the university with which the hospital is affiliated. Comfortable and practically luxurious quarters are provided. There is a joy of home surroundings and the protection of proper supervision; there is sunlight for the heart and body, and there is every effort made to give these women every physical, mental, and moral advantage that can be obtained.

Take a woman of proper type, place her within an institution that is consciously doing its best, and what must she do to contribute to the proper team-work which will mean the satisfactory conduct of the hospital as surrounding the unit of the patient? She must conserve her judgment, she must be careful, she must be faithful, she must be loyal, she must appreciate that she stands for much that is noble. Her banner must be carried high, and by bearing this aloft she will find that this will inspire her to greater deeds. Loyalty to her school, faithfulness to the physicians, devotion to her patients, should be her watchwords, and as she pursues a life of usefulness and of helpfulness she will be spurred to noble action.

This will point the way toward a normal, reasonable, judicious, conscientious effort on her part to feel that there is no point of contact where she has not been of service rather than a menace to the peace and serenity which should prevail and must be present when each individual in her department of the institution offers with great earnestness her share in the great scheme of proper team-work.

In the building of the \$1,500,000 Illinois State Colony for Epileptics at Dixon, great care is being exercised to protect the patients from their own infirmities. One of the precautions being taken in this direction is the installation of metal guards for hot radiators, steam pipes, etc., to prevent burns. When completed, the colony will accommodate 1,500 patients.



Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.

BAILEY B. BURRITT, General Director.

WILLIAM H. MATTHEWS, Director,

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### Welfare Work—The Working Out of a New Idea in Industry

BY BAILEY B. BURRITT,

General Director New York Association for Improving the Condition of the Poor.

The increasing emphasis placed on the value of a good physique among employees has been a most significant development in the industrial field during the past few years. This trend has been observed with much interest by the social worker interested in new developments affecting community welfare.

This movement centering about "welfare work" on the part of both large and small employers represents a distinctly new note in the industrial field. We had been accustomed for years to painstaking care on the part of an employing corporation to see that its machinery and physical plant were well kept up; it was the first concern of any industrial plant to see that its machinery was not allowed to deteriorate. The human organism—the worker—received relatively little attention. The supply was large; it was always easy to replace a worn-out human physique which had been allowed to deteriorate by another human organism which could for a time take its place. The theory back of such practice, although it was usually unconscious, was that it was the business of the individual worker to look after his own health and his own welfare, and that it was not a responsibility which rested on the employer. Now, however, the large employer of labor realizes to an extent probably never known before the value of health and good physique as an asset in his business plant. This idea of health and physique has spread very rapidly until we find nearly all progressive industrial organizations directing considerable attention to this problem. The working out of this idea expresses itself in practice either in a well-recognized and well-organized department of welfare work, or at least in an increasing emphasis on and interest in the health and welfare of employees. In this the employer is accepting, whether consciously or not, the social obligations and responsibility implied in his position as a large employer of labor. He is recognizing that the health and physique of the employee is not entirely in the control of the employee; that there are factors entering into the very nature of the work which he is employed to do and of the physical conditions under which he is required to do this work which control to a large degree his health and physique. It does

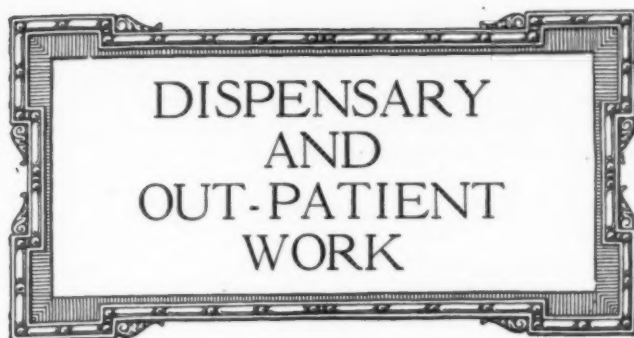
not indicate that there is any lessening of the emphasis on the individual's responsibility for his own health and physique, but that, in addition to whatever responsibility rests on the individual, there is also an added responsibility resting on the employer. The complete acceptance of this dual responsibility of the individual and of the employer who controls for so many hours of the day the acts and habits of the employee is already meaning much in the improvement of the health and physique of our American communities, and one need hardly add that whatever increases the average health of the employee increases, not only the comfort and happiness of the community, but likewise increases its productive capacity and its wealth.

There is, from one point of view, a very selfish motive for welfare work on the part of employers—namely, the increasing of the efficiency of the workingman in his business. But, on the other hand, when this is completely analyzed, it seems to be to a large extent identical with the altruistic motive of the improvement of the general health, happiness, comfort, and wealth of the community. In so far as employers grasp this broad point of view of welfare work as laying the foundation at once for improving the health and happiness of the individual, increasing the efficiency and profits of the business, and adding to the general health and happiness of society, welfare work is producing the best results, for all these interests are one, and it is the employer who has the breadth of view to grasp this fact that gets the most out of his welfare work for himself, for his workmen, and for the community, and illustrates by his acts the philosophic truth that selfishness and altruism are tied up in one bundle.

Failure to grasp this conception in its full breadth leads to a type of welfare work which is less successful; indeed, a critical examination of the value of the welfare work of any given organization can best be made by determining how nearly it meets this broad point of view. Some organizations have made the mistake of thinking that the provision of a well-lighted and well-ventilated physical plant and generally good physical condition for work, together with the added features of some provision for recreation, for medical examination, and for suitable inexpensive meals prepared under sanitary conditions, are substitutes for needed increases in wages. Wherever this point of view is consciously or unconsciously a potent factor in welfare work, there welfare work is not meeting its greatest possibilities. The broadminded employer realizes that these are necessary additions to satisfactory wages and not substitutes therefor. Adequate wages are, after all, the greatest guarantee of health and good physique. Reasonable hours of labor are perhaps second in importance in guaranteeing these. If to these two conditions can be added the other things which have been mentioned, together with the sympathetic attitude toward the employee which is usually implied in welfare work, and which is always present in any successful welfare work, then we approach an ideal for this work which in the long run gives the greatest benefit to the employer and at the same time is of the greatest benefit to the employee.

Many employers have learned to their discomfort that welfare work superimposed on employees in a patronizing manner does not yield satisfactory results. It must be spontaneous, it must be wholehearted, and it must, above all, encourage the independence of the employee. There must be opportunity for a large degree of initiative—it must be democratic. If one examines the most successful industrial welfare work in this country, these factors will be found present. Its rapid development has already meant much in terms of life, health, and efficiency.





Conducted by MICHAEL M. DAVIS, Jr.,  
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

### The Dispensary—A Paying Investment for Industry

BY MICHAEL M. DAVIS, JR., Director of the Boston Dispensary.

The time was when the employer knew all the men in his shop, many by their first names, and when all the workers had personal touch with the employer. If sickness, accident, or other ill befell one of the workers, friendly personal relationships provided help when help was needed.

The conditions which prevailed during the first half of the nineteenth century in the United States have given way to very different ones at the opening of the twentieth century. Important industrial establishments no longer number their workers by the dozen, but by the thousand. Accidents, sickness, and other misfortunes become problems of masses, and are no longer thought of as the individual troubles of John Jones or Mary Smith, in which John and Mary need a helping hand. Consequently these problems have to be reached by organized efforts, and, of these, industrial welfare work is one phase.

The changes just referred to are reflected in the medical field. A large part of the care of sickness has passed out of the hands of the individual physician into hospitals, dispensaries, and public health departments. The hospital and dispensary represent organized medical service, as the physician giving treatment in the patient's home or in his own office represents the traditional private practice of the individual medical man. In proportion as the number of workers in an industry is large, both employer and employee are likely to find that economy and efficiency are promoted by organized efforts for the care of health. This implies the organization of medical service, and substantially the hospital as the organization for the care of bed patients and the dispensary as the organization for the ambulatory cases.

The physician needs to have the facilities for diagnosis which modern medical science has devised, which increases his efficiency many times, and these in most instances can be afforded only by pooling equipment, as in the hospital and dispensary. Individual private offices can rarely afford such facilities, and this is fairly obvious in the case of surgical operations, major and minor. It is becoming more and more evident in the case of medical diseases; hence, a growing number of industrial establishments have undertaken to care for the health of their employees by the organization of efficient hospitals and dispensaries.

Although much of the work of the dispensary seems less dramatic than the major operations, which constitute a large part of present industrial hospital work, the dispensary is really the more far-reaching institution of the two. It affects larger numbers than the hospital; it deals

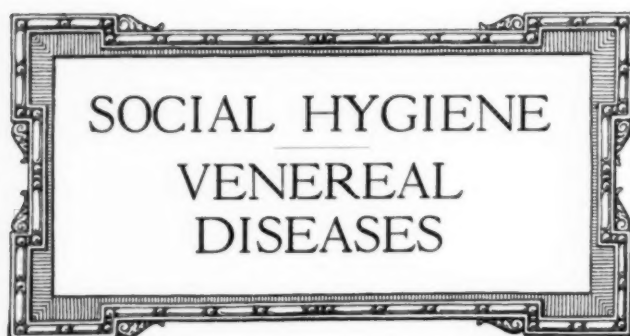
especially with prevention; it can catch disease in its early stages; it can cure minor illnesses before they reach the stage that brings serious incapacity for work or that lowers working efficiency to a point which makes the work of little profit to the employer and of no happiness to the worker himself. As health work in industry develops, we may look forward to the organization of more and more industrial dispensaries, with salaried medical staffs and businesslike, efficient organization. Such dispensaries will be developed because, even leaving aside humanitarian considerations (if that were possible), it pays to keep people well and to cure illness as promptly as possible.

Progressive industrial establishments are really pioneering the way in establishing adequate dispensary or hospital service for their employees, and more and more will do so. But the ultimate form of health work and industry cannot rest on the initiative of the employer alone, nor can it be confined to the large industries which alone can afford to maintain hospitals or dispensaries of their own. Practically all the European nations have established systems for the care of sickness among working people, based on insurance principles. Employer and employee each bear a share of the financial burden, and in many countries the state also contributes a small proportion in order to emphasize the important interest which the public has in the prevention of disease and to assist in the administrative work of the sickness insurance system.

We have seen within the last five years a movement for workmen's compensation laws sweep over the country. No less than thirty-three states have passed such laws during this period, placing the care of industrial accidents under an organized system instead of leaving them to the old individualism. During the next five years, as signs already appearing indicate, we are likely to have a similar movement for the care of sickness. While there are enormous benefits to be derived from the prompt cure of illness after it arises, the financial and the human benefits of increased preventive work are still greater. To some extent in the field of cure, and to a greater extent in the field of prevention, the dispensary can and should play a large part. Every well-organized effort for the health of the employee in an establishment is desirable in itself, and is also a step in the direction of a more and more comprehensive system for the care of the health of the workers.

Miss Mabel Fletcher has accepted an appointment as superintendent of the Hudson City Hospital, Hudson, N. Y. Miss Fletcher is a graduate of Smith College and of St. Luke's Hospital, New York city, and has completed a course in hospital management at the Teachers' College of Columbia University. For a time Miss Fletcher was night supervisor at Mount Sinai Hospital, New York, and later superintendent of a hospital in New Haven, Conn. More recently she has been located at Wellesley, Mass.

Miss Beatrice Murdoch, an instructor in the nurses' training school of St. Luke's Hospital, St. Louis, formerly connected with the Protestant Deaconess Hospital, Indianapolis, Ind., and later with St. Luke's Hospital, Duluth, Minn., will leave this country shortly for Shanghai, China, from which point she will be assigned to one of the Methodist mission hospitals in the interior of China, probably at Chengtu or Chungking. Miss Murdoch's chief duty in her new field will be the supervision of the dietary in the hospital to which she is assigned, a work for which she is understood to be well prepared. Although both Chengtu and Chungking are large cities and located not more than 700 to 800 miles from Shanghai, Miss Murdoch's trip from the latter city to either of them will require about forty days' traveling, owing in part to the fact that the rivers cannot be used at this time of the year.



Conducted by WILLIAM F. SNOW, M. D.,  
General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

#### Industrial Welfare Work and Social Hygiene BY AMERICAN SOCIAL HYGIENE ASSOCIATION.

The social hygiene movement is, naturally enough, better understood as it grows and gains force, but even yet the question comes up again and again, What is social hygiene? What are its purposes and its methods? A few years ago its purposes were formulated by Dr. Eliot as "to acquire and diffuse knowledge of the established principles and practices, and of any new methods which promote, or give assurance of promoting, social health; to advocate the highest standards of private and public morality; to suppress commercialized vice; to organize the defense of the community by every available means—educational, sanitary, or legislative—against the diseases of vice."

This statement drew together the several lines of attack which had been followed for many years by those who realized the menace to our institutions which lies in the evils with which social hygiene seeks to cope. It included, in essence, the educational, medical, legal, social, and moral attacks on the social hygiene problem which have gained so much support in public opinion during the past few years; but it still left social hygiene as a large and generalized group of activities rather than as a specific program. A more recent statement shows some of the implications of these activities by defining social hygiene as "essentially a constructive movement for the promotion of all those conditions of living, environment, and personal conduct which will best protect the family as an institution and secure a rational sex life for the individuals of each generation."

Certain specific principles and policies have become generally accepted as essential in any program of social hygiene endeavor. On the legal side, it is recognized that attempts to regulate prostitution have never succeeded, the policy of segregation is discredited and abandoned, and the strict enforcement of repressive laws is looked to as the immediate weapon of attack. Among such laws the injunction and abatement law, now in force in twenty-six states, is the most effective measure yet devised for the repression of prostitution. Medically, venereal diseases have become recognized as one of the great public health problems, both as to extent and especially as to results on individual, family, and community interests. There are now definite plans, not only for providing diagnosis, advice, and treatment for existing cases, and for protection against infection, but for measures looking toward the reduction and ultimate eradication of these infections.

The primary concern of social hygiene educational effort is to teach the individual to understand the facts of

sex and reproduction as they are presented to him by his environment, or by his own physical and mental experiences, and to make such knowledge an effective guide for his thoughts and acts in such relations. This involves not only the physiology and anatomy and something of the psychology of sex, but also the laws of heredity, or what is popularly called "eugenics," the fact of venereal diseases, and such related knowledge as every mature person should have. The problem is to present effectively this body of information as it is needed by the individual as he grows from infancy to maturity, so that at each stage he may have only that information which he needs in dealing with his experiences, and yet may have it before he encounters any particular problem.

Social hygiene thus relates itself broadly and vitally to home and community life. Its functions as a protector of community, family, and home bring it close to industrial welfare work, especially if such work hopes to do more than minister to the immediate interests of the organizations which institute and conduct it, and in the broadest sense seeks to promote the general welfare of their employees, even beyond the range of mere industrial efficiency. It would be shortsighted indeed to overlook the close connection of general welfare with general efficiency, or to deny the specific importance of education for sex life in any plan for forwarding the well-being of the individuals of any group, industrial or otherwise.

Welfare departments, as a rule, have to deal with the problems of late adolescence and of adult life, and thus do not meet the vexed questions of sex instruction for childhood and early adolescence; but they have the task of attempting something effective for boys and girls, men and women, many of whom lack any foundation in early training for a rational sex life, and in whom a defense must be built up against ideas and habits acquired in ignorance and fostered by popular misconceptions of the truth about venereal disease, the so-called sexual necessity, standards of morality, and the like. To this defense must be rallied not only the forces of knowledge through the instruction of individuals and selected groups, but the moral forces that transmute knowledge into wisdom and give effect to its guidance.

#### The Composite Appeal

BY REV. GEORGE R. DODSON, St. Louis

The social hygiene movement is, in certain fundamental respects, new. It is an attempt to do what has never been done in the history of the world. Those who began it had a high purpose, but in the nature of the case could see but a little way before them. The experience of the last few years has brought home to them in a vivid way the immense scope and complexity of the enterprise they have in hand. The further they advance, the more clearly they see that their work is education, education, and ever more education. Nothing can change wrong ways of living and abolish the resultant misery and disease except changed ideas, and especially a revolution in those ideas tinted with passion which we call ideals, and which go deep enough to affect the levels where conduct springs.

The real difficulties we have to face are, if the expression may be pardoned, not so formidable as some that are unreal—that is to say, the movement is retarded by certain almost inevitable popular misunderstanding. It is announced that the social hygiene societies are endeavoring to combat venereal disease, and that to this end they give lectures designed to reveal to the public the vast amount of suffering and the waste of life due to infections which are spread abroad through society by the



social evil. Without further inquiry, many minds hastily generalize from this fact, and assume that the motives appealed to by our propaganda are solely prudential. Others, without any justification in fact, leap to the conclusion that children of immature years and clean lives are to be deluged with information concerning the pathology of sex and so frightened into virtue.

This is absurd, of course, but such phantoms are very real obstacles to a great undertaking such as ours. It is therefore essential to teach patiently and persistently until the public is made to understand that the subject has many sides, and that the nature of a lecture on social hygiene is in every case determined by the character of the group that is to receive it. The social hygiene leaders have no message for such an abstraction as Man. They understand perfectly that what is real is boys and girls of

introduce a poison into their tissues that would destroy all hope of the finest happiness and the widest life.

For those who are already living wrong, and therefore thinking and feeling wrong, a very different treatment is necessary. It is well for the physician to tell them in the plainest way what they are doing—to illustrate, by diagrams and stereopticon pictures of the lesions caused by venereal disease, the folly of their course. Brioux's play, "Damaged Goods," is not too strong or realistic for this class. The fear of the Lord may be only the beginning of wisdom, while the highest love of the true, the morally beautiful and good cast it out—still it is the beginning. In the proper place and time it is a legitimate motive to be used by those who are seeking to control and direct the greatest of all passions.

The fact is that the whole gamut of human motives



Fig. 1. Sex education begun in falsehood and continued through disease to tragedy.

different ages, their fathers and mothers and teachers, young men of clean life and young men who are sowing wild oats, and mature men and women, some of them with sound knowledge and right ideals concerning human relations and others not so well equipped.

We urge parents to instruct their little children, to forestall the impure sources of misinformation, to cultivate in their little ones, by gradual and tactful instruction, an appreciation of the place of sex in life, and to create and maintain the highest moral standards in fundamental human relations. The teachers of untainted youth need to appeal chiefly to their native loyalties and chivalry, to lay the stress on the ethical and religious motives, and to make clear and explicit their own native love of the best. It is not necessary to dwell on the pathological aspects of the subject as if they were regarded as in great danger. It is enough for them to glance over the edge of the abyss and be made to realize that a single so-called lark may



Fig. 2. Sex education founded on truth and leading to normal sex life.

must be used, but the stress, wherever possible, laid on the highest. In this work of spiritual engineering this is as wise as it is congenial to our feelings, for experience shows that the highest motives have the greatest inhibiting and controlling power. Eugenic discussions, for instance, are a mighty aid. They create a profound appreciation of the dignity and importance of sex. Young people can easily be led to realize that they have a great part to play in keeping the world alive and growing; that, as they are descended from the broad-shouldered men and deep-chested women, from the victors in every age of the long past, so they may reasonably look forward to being the parents of strong sons and fair daughters, who will prove efficient and capable in their day and generation.

The appeal of the social hygiene movement is therefore composite. All motives from the lowest prudential to the highest religious and moral are to be employed in this movement.



Conducted by ALBERT WARREN FERRIS, A.M., M.D.,  
Saratoga Springs, New York.

Please address items of news and inquiries regarding The Modern Sanatorium to the editor of this department, Saratoga Springs, New York.

### The Sanatorium a Tutor in the Art of Living for All Workers

The patient who enters a sanatorium for treatment (leaving out of consideration entirely the tubercular) suffers either from improper modes and habits of living, or from disorders and conditions incident to his occupation. The latter class of sufferers is by far the more numerous, if we properly include among industrial workers those who industriously perform their task behind the desk of the accountant, in the private office of the banker, in the studio of the musician, in the private consulting room or public clinic rooms of the physician, as well as those who are embraced in the category of artisans, mechanics, factory workers, and shop employees.

The patients are pallid, nerveless, and languid; or florid, anxious, and sleepless; or depressed; or short of breath; or emaciated; or complaining of loss of concentration, or of constant or fugitive pains; or detail some other chief complaint which is to them of enough moment to cause them to seek relief from present discomforts, and to take account of possible reduction of future efficiency.

Some of these patients have been working too many hours a day. Some have been exposed to the hazard of dust, or of smoke, or of poisonous fumes. Some have plodded on, striving against the odds of unhygienic environment and habits of life. Some—a large majority—are paying the penalty of improper eating, and are suffering from the direful results of food poisoning. The sanatorium takes up a study of all the health problems in modern industry, and covers a broad field.

Improper diet and ignorance or neglect of colon hygiene are factors in the production of a vast percentage of all sanatorium patients of every class and in every station in life. Hence the sanatorium undertakes very early the important duty of teaching correct diet. It shows how sufficient nutrition can be secured from a proper daily total of the calories of "a well-balanced ration" suited to the individual. It indicates the dangers of the animal proteids in a vast majority of sedentary workers, and points out the proper substitutes. It sets forth the dangers and the deleterious results of stimulants, including tea, coffee, all alcoholics and tobacco. It teaches that digestive processes are retarded by spices and condiments. It demonstrates the disturbance caused by certain uncooked acid fruits, or by the consumption of candies (especially chocolates) at frequent intervals.

Systematic employment for exercise of the odds and ends of time of even the busiest sedentary worker results in improved nutrition and digestion, and indeed is absolutely essential to the improvement of the heart-arterial

cases. The routine life at a sanatorium makes easier the continuance at home of salutary attention to heretofore stagnant groups of muscles and inactive skin in the individual whose circulatory apparatus is at fault.

Regulation of rest is taught by the sanatorium. The joys of a feeling of adequacy and vigor on arising in the early morning, when once experienced by the patient, will rarely be exchanged for the excitement of pleasures or mild dissipation during the hours of the night which properly belong to the realm of Morpheus.

No one thinks of a sanatorium without mentally picturing a bath room, and this is a gloriously true concept. The bath habit, formed or at least systematized in the sanatorium, is "a joy forever," as well as a potent aid to recovery of a measure of health. The special water treatments of an establishment are impracticable in the home; but there are simple measures which should and can be followed daily—even if one has no tub, but only a basin and a couple of towels—to the certain stimulation in a rational way of nerve action and to a daily contribution to red blood vigor.

Finally, the sanatorium fulfills the very important mission of preaching against drugging and of teaching more efficient methods. Drugs should not be spared when the physician decides they are needed, but the slavish dodging of symptoms or obscuring of preventable causes by the use of soothing and comforting drugs cannot be too emphatically condemned. Patent medicines and popular drugs are responsible for a vast amount of reduced efficiency and capacity, if not of actual invalidism.

ALBERT WARREN FERRIS.

### Aftermath of the Ohio Convention<sup>1</sup>

Dr. A. C. Bachmeyer,  
Superintendent Cincinnati General Hospital,  
Cincinnati, Ohio.

Dear Doctor: The writer having been called to Boston, this is the first opportunity I have had to address you, and as an exhibitor at the Ohio State Hospital Association convention I wish to thank you, on behalf of the Hockaday Company, for the kind consideration shown me by your committee while at this convention.

The writer has spent the better part of his life traveling throughout every part of the United States, but I am very emphatic in my statement when I say that the Ohio State Hospital Association convention, held in Cincinnati, was the most successful convention I have ever attended, both from the standpoint of attendance and interest. This is the first hospital convention I have ever seen where the Catholic sisters took the floor and joined in the voting. This opens a great channel of thought as a connecting link between the American Hospital Association and the Catholic institutions of America. This would make one of the most powerful associations in America, and to all who are interested in the management of hospitals this should afford food for much thought.

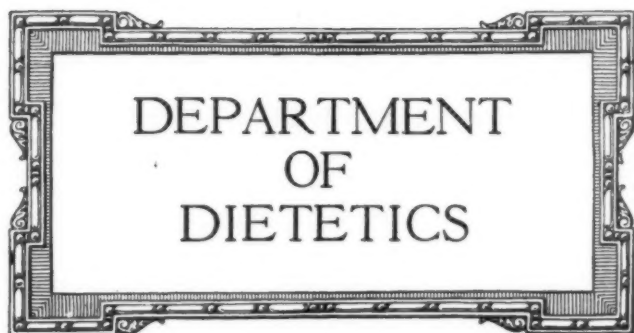
You are certainly to be congratulated on the way this meeting was managed, and I wish you could give me the formula of your method of getting such a fine representation together. From a financial standpoint, as an exhibitor, will say the Hockaday Company and myself were highly pleased with the results we obtained through this convention.

G. A. BEEM,

The Hockaday Company, 111 West Monroe street, Chicago.

<sup>1</sup>The Editor asked Dr. Bachmeyer and Mr. Beem to be permitted to publish this letter, as it seemed to contain some thoughts that should have publicity.





Conducted by MISS LULU GRAVES,  
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

### The Dietitian at Work in the Modern Industrial Plant

BY ANNA M. DUGUAY, Dietitian National Lamp Works, Cleveland, Ohio.

I doubt if it has occurred to many of our big business men that the management of a dining room for their employees can be efficiently handled by a woman, especially if she has had a scientific training in dietetics. She should be a woman of refinement and culture, one who can command the respect of both the management and the employees. She should also have a business training and an ever-present sense of tact and courtesy.

Most employees' dining rooms are managed by men who, with all due respect for their other qualifications, have little or no conception of food values. A step in advance of this policy was taken by the management of the National Lamp Works some three years ago, when they opened and placed under the supervision of a trained dietitian a dining room for their employees at Nela Park, Cleveland, where it is aimed to serve daily a plain, well-balanced menu. Specifically, this menu consists of a soup, meat, meat substitute, potato, one other vegetable, pudding, ice cream, two kinds of pie (not because pie is a factor in a well-balanced meal, but because it is demanded), tea, coffee, milk, buttermilk, fresh fruits in season, apples, oranges, and cooked fruits every day. A salad is served daily from early spring until late fall. Choice is offered of white, brown, and bran bread, and also various assortments of rolls. Cake, cookies, and the like are served frequently, all pastries being made in the plant's own kitchen.

The dining service at this particular institution is really threefold. First and foremost, there is the cafeteria (operating under what is sometimes referred to as the serve-self plan). Second, there is a private dining room, with waiter service, patronized mainly by the managers, but open also to other employees of the company and their guests, the cost being slightly higher than the counter service. Third, the department is called on frequently during the summer months, and occasionally at other times, to serve banquets for different organizations holding their conventions in Cleveland. Banquets are also served from time to time on the camp grounds at Nela Park in connection with industrial outings and other outdoor affairs. Sometimes as many as 500 people are served on these occasions.

Coming back to the cafeteria-plan dining room, it is on the first floor of the main laboratory building, centrally located. There are two two-way counters, one in each half of the long room, making it possible to serve 200 people

in about six minutes' time. The daily attendance at the noonday meal averages about 450. The cafeteria counters are constructed of sheet steel, enameled white, with glass tray spaces, copper and german silver being used for certain interior and upper portions. These counters clear the floor by about six inches, making them easily kept clean and sanitary. The tables were made to order from a selected grade of yellow poplar, stained, shellacked, and varnished. They can be folded very easily, making it possible to pile them away and clear the dining room for lectures, dances, etc., on short notice. Each table is 32 by 36 inches and seats six people. The chairs are of bent wood, chosen on account of its durability and lightness. The private dining room, already mentioned, has a seating capacity of fifty.

The kitchen is large, light, and airy, with pastry, vegetable, and meat rooms, and it connects with a large dishwashing room. All tables and receptacles, such as bins, drawers, and the like, are made of white enameled sheet steel. The floors are of red tile.

The plan under which this dining service is managed may be of interest. A special appropriation is made for its maintenance at the beginning of each year. All book-keeping, purchasing of supplies and furnishings, paying of bills, banking, etc., are done through the dining room office, and all overhead expense connected with it, such as rent, office work, and management, are charged to this department, and it thus operates practically as a business in itself. A daily record is kept of supplies used from the store room and of cash taken in. At the end of the month the books are closed, showing the loss or gain for that month. At the end of the year a complete inventory is taken of store room stocks on hand in order to get an accurate check of the books. When the inventory was taken at the close of the year 1915, the stock room book showed a difference of only \$1.78, which speaks well for the accuracy of this simple method of dining room accounting.

The managing of the dining room service carries with it the very interesting work of teaching cooking to the girls employed in the different factories of the National Lamp Works. When one finds these girls, after working an eight-hour day, eagerly waiting for the weekly cooking class which keeps them from one to one and a half hours longer, it can readily be appreciated how anxious they are to learn something of the proper methods of cooking and of home management. The girls seem to take a keen interest in every subject discussed, and in almost every instance they have carried out in their own homes the simple and sensible principles of household management that have been taught them, often to the great delight, not to say wonderment, of their families.

In conclusion, let me say that the woman who possesses a dietetic and business training, combined with good common sense and a fair knowledge of human nature, has a wonderful opportunity for the performance of worthwhile service in the present industrial field. Most of our large factories employ many girls who were obliged to go out to work very early in life, without benefit of the training which can be gained from schools, not through any fault of their own, but because circumstances demanded that they help maintain a home for younger brothers and sisters. These girls, most of them, will be mothers of a coming generation. Can anyone imagine a more important feature of service work among employees than that of teaching these young girls the art of home making?

## Wheat Flour

BY G. L. TELLER, M. S., Chicago, Ill.  
[Continued from the July issue.]

In the article in the July issue it was pointed out that the color of flour is dependent on two factors—on the amount of natural yellow coloring matter present in the wheat and on the grade of the flour, which grade is determined by methods of selection and combinations of different flours produced during the process of milling. As has been pointed out, the natural yellow of the flour is caused by the presence of the same coloring matter as is found in carrots, where, because of its greater concentration, it is of more pronounced shade.

It has long been recognized among those who have had to deal with flours that they improve materially as to color with age, but the cause of this change was not so clearly understood until certain commercial processes were introduced into the mill by which this yellow color was greatly reduced or wholly removed during the process of milling. This process is what has become generally known as flour bleaching, and has been widely practiced and extensively discussed throughout the country during the past twenty years. This process consists essentially of the passing through the freshly milled flour a current of air containing a small quantity of certain gases which have the property of combining with the yellow coloring matter to produce a colorless compound. Gases which have been extensively used for this purpose are oxides of nitrogen, nitrosyl chloride, and chlorine. Oxides of nitrogen, when introduced into the flour, leave there a minute quantity of material which has the property of giving to certain chemical reagents a pronounced color. The well-known Griess reagent, which is extensively used for detecting the presence of nitrites in water, has been commonly used to show the presence of these compounds in flour. Nitrates in water have a bearing on the wholesomeness of water for drinking purposes, because their presence under certain conditions indicates the presence of certain kinds of bacteria, for it was long ago discovered that many unwholesome waters contained greater or less quantities of nitrites. In this case the nitrites are not objected to because of any probable unwholesomeness of them, but because of the indication of unwholesomeness of the water from other causes. Even here it is necessary to differentiate between nitrites which have been developed in the water and those which have been taken up by the water because of exposure to the air, for it is well known that water, when it has been exposed to the ordinary air of the kitchen for a few hours, accumulates enough oxides of nitrogen from the air to give a pronounced color with the Griess reagent.

The presence of oxides of nitrogen in bleached flours has led to objections to such flour on the ground of the presence of a deleterious substance. The amount of such color developed from ordinary bleached flours is such as to indicate only a very small amount of oxides of nitrogen, the average amount in well-bleached flours being equivalent to about one part per million of the flour. Some writers have reported experiments which appeared to show that these minute quantities of nitrite reacting material were injurious to digestion, holding that they checked the digestion of starch in the mouth by the ptyalin of the saliva and in the stomach and intestines by retarding the action of pepsin and pancreatin. In view of these facts, the writer, in conjunction with Dr. J. A. Wesener, has made a large number of experiments bearing on this question, and has found, first, that when flour containing nitrites is made into a dough containing yeast, the

nitrites are quickly removed by the yeast, so that their presence is no longer apparent; that when flour containing nitrites is baked into bread, the nitrites, all or nearly all, disappear, and, where any remain, the amount present is much less than would be accumulated in a slice of bread exposed to the open air of the kitchen over night. We have found also that nitrites in flour can be made to disappear by heating, as in the process of baking.

A large number of experiments on the influence of nitrites in digestion have been made. The results of these experiments have been incorporated in a paper which was published in the *Journal of Industrial and Engineering Chemistry* in 1911, of which copies can be obtained on request. Following are some of the conclusions arrived at in these experiments:

Sodium nitrite does not interfere with the digestion of starch when present to the extent of one part in one thousand. Peptic digestion is not inhibited by small quantities of nitrous and nitric acids, and the hydrochloric acid necessary for the digestion of proteids by pepsin may be wholly replaced by an equivalent quantity of these acids. Pancreatic digestion is not inhibited by the presence of relatively large quantities of nitrites, nor is its action restrained on proteids which have been previously subjected to appreciable quantities of nitrous and nitric acids.

Further than this, there is no proof that flours as commercially bleached contain either mineral nitrites or nitrous or nitric acids. The bleaching gases unite directly with the coloring matter itself, and, as pointed out in the article referred to above, Vaughan has shown that the substance which gives a nitrite reacting nitrogen is a nitroso body, and is not poisonous nor does it have any action on the blood.

Another point of contention in bleached flour has been that the removal of the coloring matter enables millers to defraud the people by substituting an inferior flour for a better grade. The writer has personally examined a great many thousand flours which have been bleached by different commercial processes and which have not been bleached, and has found that it is not more difficult to distinguish between the different grades of flours when they are bleached than when they are not bleached. Flour which has been bleached produces a whiter loaf of bread than will be produced when it has not been bleached. For this reason many prefer a loaf of bread made from a lower grade of flour which has been bleached than bread made from a higher grade of flour which has not been bleached.

Dr. E. L. White, of Lewiston, Idaho, has recently opened a new 30-bed hospital in that city. The building is a modern one of two stories and basement, embodying many of the newest ideas in hospital construction. An innovation is the raising of windows to the ceiling to bring the window base on a level with the patients' cots, which are 30 inches from the floor. Metal appliances are placed on all of the windows to keep out dust. Hard maple flooring is used, except in the operating room, bath rooms, and lavatories, the floors of which are of tile, with porcelain wainscoting. Built-in conveniences are a feature of the kitchen. The equipment includes indirect lighting, telephones in all rooms, silent signals, one electric elevator for general use and one for food service from the kitchen to the floors above. The cost of construction and mechanical equipment is said to have been about \$25,000.

The new municipal hospital at Lancaster, O., erected at a cost of \$40,000, was opened July 1, with Miss Lillian Allen in charge. Miss Lina Enders, a graduate of the Cincinnati General Hospital, is assistant superintendent, and Miss Anna J. Hawk, who received her training at the Willard Hospital, Chicago, is night supervisor.





VINCENZ MUELLER, Technical Editor.  
GEO. W. WALLERICH, Associate Editor.

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

#### Food Carriages at Sea View and Greenpoint Hospitals

BY WILLIAM G. LUSH,  
Department of Public Charities, City of New York.

At certain institutions of the Department of Charities it was decided to experiment with the carriage system of serving food, as it was thought that a material saving both in the food itself and in labor could be made, as well as affording a greater degree of satisfaction to the patients and ease work on the wards. Dr. Edward S. McSweeney, superintendent of the Sea View Hospital, worked up the designs



New food carriage.

for the first carriages, and the author collaborated with him in altering this first scheme to the one described in this article.

The principal considerations were to have a carriage which would stand very rough usage even when handled by patient help, and also one that would keep the food hot during a reasonable period of time and contribute to the ease of serving. These trucks are built up on a steel frame constructed of angles welded by the oxyacetylene process, as experience has shown that riveting is not sufficient. This framework rides on 6-inch casters with rubber tires, and has a cross-bar handle at each end near the top to facilitate handling. The framework has two shelves of Russian iron, the upper one of which is inclosed for carrying dishes. The sides of this inclosure move outward and upward on ratchet supporting bars, thus forming a counter from which food may be served when the truck is in use. The height of these shelves is an ordinary

counter height, but can vary according to the judgment of those ordering the trucks. It might be desirable in a hospital in a locality where the average height of nurses was unusual to increase the height by a few inches, and likewise, if the case were opposite, to decrease it.

The top of the framework carries two Monel metal tanks, with lids and clip fasteners on the sides, and handles are placed on each end. The object of dividing the tanks is to secure easier handling. It is contemplated substituting castings for the present sheet metal fasteners for the handles and clips in the next lot of these trucks. The interior of the tanks has a standing diaphragm raised about 3 inches from the bottom, and pierced with openings suitable for the reception of the aluminum food-carrying vessels. These vessels will vary in size according to the needs of the institution using them, but it is usual to figure on a basis of about twenty to twenty-five patients being served from one cart. The vessels, of whatever size, are of a standard pattern and a standard manufacture, in order that replacements may be cheap and easy. The bottom of each tank contains an ordinary plug stopper made of brass, ground in so that the tanks may be drained into a vessel placed on the upper shelf when necessary.

The finish of the trucks is white enamel, except the counter shelves and regular shelves, which are of Russian iron, and the tanks, which, as before stated, are Monel metal. The handles at each end are nickel, and the ends also carry a number. At one end is placed a card holder suitable to the size of the diet card used by the institution.

#### New Sink for Plaster Work

In presenting this illustration of a sink with a plaster trap attachment, developed at the suggestion of Mr. Oliver H. Bartine, superintendent of the New York Society for



Sink for plaster work.

the Relief of the Ruptured and Crippled, special attention is called to the necessity of all hospitals installing a plaster trap to all sinks used for plaster work in order to prevent stoppage by waste lime, which so frequently occurs. The accumulation of particles of plaster becomes hardened and is impossible to remove by the usual methods, and necessitates the tearing up of pipe, causing inconvenience and expense. The sink was designed

especially for plaster cast work, and will be found advantageous to all institutions because of the protective rim and drain traps.

#### Dim-a-Lite Rheostat

One of the most convenient and comfort-giving electrical appliances for use in hospitals is a little device known as the dim-a-lite. The dim-a-lite is a small, inconspicuous attachment that makes it possible to turn an incandescent electric lamp up or down just like gas. In principle, the dim-a-lite is a compact and indestructible rheostat, which is manipulated by pull chains to reduce the normal current through the lamp filament. There are five changes of light—full, half, dim, nitelite, and out.

Dim-a-lites are especially valuable in hospitals, sanatoriums, and similar institutions. By adjustment of the chain-pull, one may have a modified light, a full-on in emergency, or a mere glow during the night. With extension cords, they can be easily controlled by any patient. There is also manufactured a dimming socket, which may permanently replace any ordinary key or chain-pull sockets now installed on brackets or fixtures. The action of this dimming socket is the same as in the dim-a-lite.

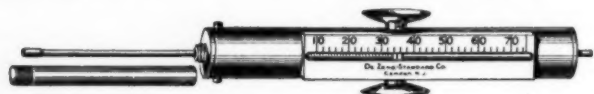


Dim-a-lite rheostat.

toriums, and similar institutions. By adjustment of the chain-pull, one may have a modified light, a full-on in emergency, or a mere glow during the night. With extension cords, they can be easily controlled by any patient. There is also manufactured a dimming socket, which may permanently replace any ordinary key or chain-pull sockets now installed on brackets or fixtures. The action of this dimming socket is the same as in the dim-a-lite.

#### Simplified Tonometer

A new type of tonometer for taking direct readings of the intraocular pressure in glaucomatous eyes has been devised by Dr. Souter. This instrument is extremely simple in construction and method of application, giving direct readings, which are taken with the patient in upright position and thus a diagnosis can be rapidly made. It contains fewer parts, is smaller and more portable, as well as less expensive, than other tonometers which are now in use, and it is therefore claimed by the inventor that on account of these facts this tonometer is especially well adapted for clinical and hospital use. The instrument is about the size and weight of a fountain pen, and may be carried in the vest pocket. It is constructed entirely of metal, and consists of a light tubular body, with side



Souter's tonometer

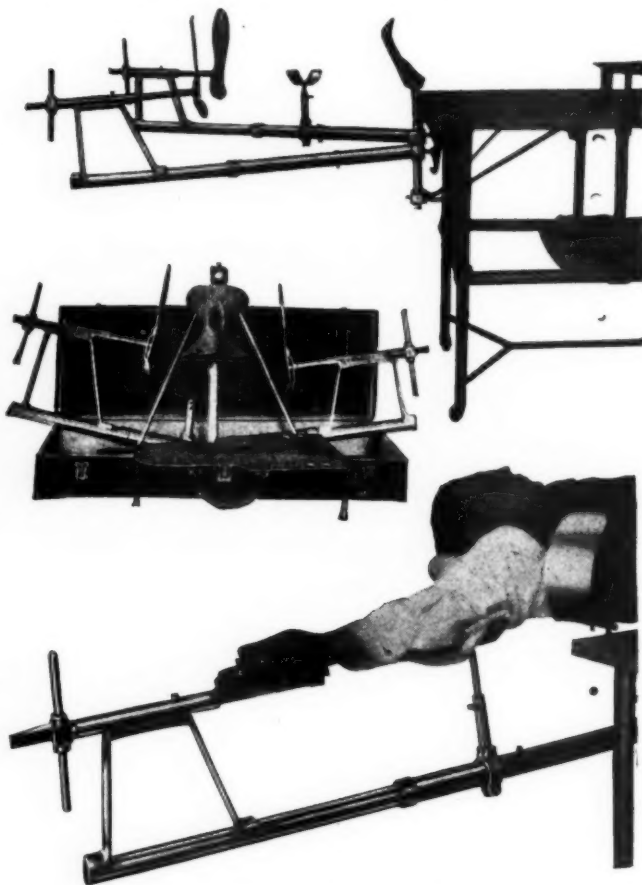
finger grips and open scale, and has also internal end caps, which support a resiliently balanced sound with piston index.

A stop or break is provided near the forward end of the casing on either side for temporarily retaining sound in diagnostic position for reading. The counterpoise construction is exact, and includes antifricition bearings for

the sound and a compensating precision spring, which is made of uniformly drawn phosphor-bronze wire. As the elastic limit of the spring greatly exceeds the requirements, the reliability of the instrument should remain unimpaired irrespective of time or use. The scale calibrations are accurately cut into the metal, and represent pressure in millimeters of mercury. The instrument is well finished in black nickel, the scale contrasting clearly in white. The contact portion of the sound may be sterilized in the usual manner without injury. Complete directions of technic are furnished with the instruments by the manufacturers.

#### Extension Apparatus

Mechanical devices for the purpose of making traction in fracture cases and general orthopedic work have become quite popular with surgeons, and several different apparatus and tables have been offered to the profession during the last few years. Recently a new apparatus has been presented by Dr. Charles Geiger, which is so arranged that it can be attached to a regular operating table, thus converting it into an orthopedic table, as will be seen by the accompanying illustrations. The extension arms are made of steel tubing, telescoping, the extension



Geiger extension apparatus.

ranging from 12 to 40 inches, and the apparatus is available for any size person. The elevation of the so-called saddle supporting the hips has a range of 6 inches, which will easily allow the application of plaster of paris casts to the hip and back of the patient. Three foot plates of different sizes, as well as three different sizes of plates molded to fit the hand, are provided. The whole apparatus can be taken apart and packed into a carrying case for transportation.



### Apparatus for Handling Helpless Invalids

An apparatus for raising and moving about helpless patients has recently been put on the market under the name of Bair's wheel crutch. It is claimed for this apparatus that with its assistance a heavy patient can be raised or lowered with but little exertion by a nurse or even a child. It is not necessary for the patient to exert

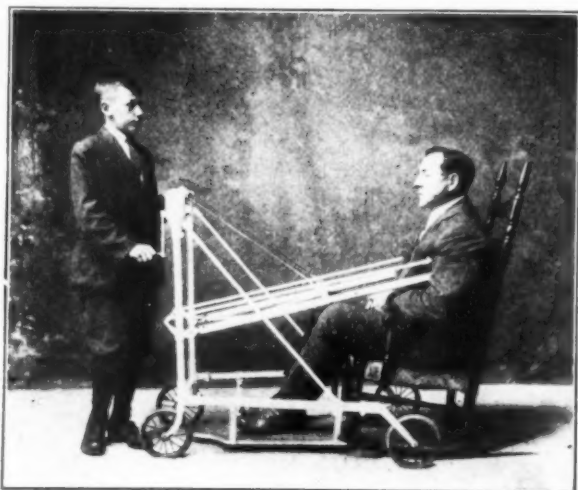


Fig. 1. Apparatus for handling helpless invalids. Sitting position.

himself at all, and he can be handled comfortably, although his arms and legs may be absolutely helpless.

The construction of the apparatus is such that the two rear wheels can be pushed under the bed, and they are far enough apart to go on either side of an extra wide chair, yet not too wide to allow the apparatus to pass through a common door. The crutch saddles are so arranged that they are always in a horizontal position, and they can be quickly adjusted to fit any size patient.

Fig. 1 shows the general construction of the apparatus



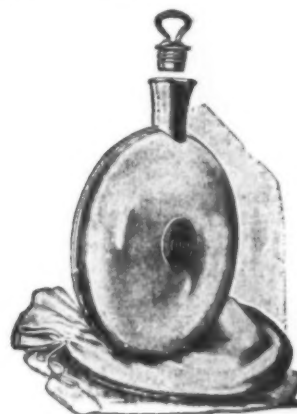
Fig. 2. Apparatus for handling helpless invalids. Standing position.

and Fig. 2 illustrates the patient in standing position after having been raised from a low chair.

The manufacturers evidently are confident that this apparatus will do all they claim for it. They submit testimonials from users of the wheel-crutch and offer to send the apparatus for inspection and trial to any responsible person or institution.

### An All-Metal Hot Water Bottle

This is a new hot water bottle, made entirely of metal, for which the manufacturers claim many advantages over other metal bottles that have been offered in the past. One of the principal advantages mentioned is the convex exterior, which has increased its utility to a remarkable degree, as it conforms to the form of the human body. It is a well-known fact that, as water cools in a metal bottle, a vacuum is formed, and, unless the interior is reinforced, a gradual collapse takes place from atmospheric pressure. On account of the peculiar construction with an internal spring, this bottle at once resumes its normal



"Cello" all-metal hot water bottle.

shape as soon as the stopper is removed. It has been proven that a metal bottle will retain the heat about 50 percent longer than the ordinary rubber hot water bottle. The use of such a device, therefore, should not only afford added comfort to the patient on account of not being disturbed so frequently for the purpose of renewing the hot water, but should also lessen the labor of the nurses and attendants.

Another advantage claimed is that it produces the dry, penetrating heat needed in many cases, and that it will stand any temperature attainable, is self-sterilizing, and there is no possibility of leaking or bursting. An air chamber around the neck of the bottle permits of comfortable handling, and a soft flannel bag is furnished with each bottle, so that no metal will come in direct contact with the skin.

The original cost of the apparatus does not appear to be excessive, and, as the manufacturers offer a five-year guarantee with the bottle, it seems that it should commend itself to hospital superintendents or purchasing departments. The bottle is manufactured by A. S. Campbell Company, of Boston, or can be secured at any reliable physicians' supply store.

Miss Margaret H. Dugan, a graduate of the Long Island City Hospital, class of 1904, is supervising nurse at the new Queensboro Hospital for Contagious Diseases, recently opened at Jamaica, L. I., by the New York City Department of Health. Since her graduation Miss Dugan has seen service in the Kingston Avenue Hospital, Brooklyn; the Willard Parker Hospital, Manhattan; the Riverside Hospital, Bronx; and the New York city tuberculosis sanatorium at Otisville.

As a "preparedness" measure against summer fevers, the city health department of San Antonio, Tex., is enforcing, among other precautions, an ordinance which requires stable refuse to be put in air-tight receptacles daily. The city has recently completed a system of sanitary sewers, which is making the work of the health department easier.

## HINTS FOR HOSPITAL SUPERINTENDENTS

This column is maintained as a help and reminder to hospital workers about the little things in administration. It is urgently requested that everyone contribute his and her "hints." Each item added to our knowledge helps to fill the common storehouse from which all may draw supplies.

There is a wise old saying, "sufficient unto the day is the evil thereof." This maxim ought to be hung over the desk of every hospital superintendent. It would be a tremendous inspiration not to go out looking for tomorrow's troubles today. It is said that no one ever died from hard work—it is only worry that kills; and it is almost equally true that there is not enough trouble coming to us from hour to hour or day to day to overcome us. It is only when we accumulate a whole lot of troubles of the recent past, and go out borrowing troubles from the future, that we are overcome.

Accuracy is one of the most impressive of all virtues. The hospital superintendent who can convince his or her trustees, members of the medical staff, and the employees that he or she is thoroughly informed on all topics that can come up in connection with the hospital's activities, will have achieved a 50-percent success at the very outset of an attack on any problem. Another most valuable and indispensable virtue in a hospital superintendent is the ability to say, "I don't know." This should always mean, however, that "I shall immediately find out." The hospital that is fortunate enough to have a superintendent to whom everybody can feel that they can go for information is very likely to be a very well-governed institution.

There should be a place for everything in the hospital, and everything should be kept in its place. It is not what you have in stock that makes your supply valuable, but it is what you can get at immediately when it is wanted. A pair of crutches that cannot be found in the store room are a poor substitute for a good leg; a piece of apparatus for a surgical dressing or for a splint that happens to be somewhere else when it is wanted is not a very serviceable support for a broken bone. All of us have seen medicine cabinets with four or five bottles of the same medicine in them because the medicine nurse found it easier to send to the drug room for a new bottle than to wade through her heterogeneous stock and find the one she ordered day before yesterday. Every hospital in this country has its attics and store rooms full of stuff that either ought to be in use or else destroyed, or sold to the junk man.

Most hospital superintendents attempt to do too many details of their work. Of course, there are very small hospitals in which the superintendent has to do very many things; she keeps the books, runs the training school, or at least handles the nurses; she sees personally to the nursing of each patient, she buys supplies, directs the cleaning force, has a hand on the levers in the power plant, and some of the trustees even expect her to stoke the fires. What opportunity has a superintendent under such cir-

cumstances to husband ideals or to dream dreams about service? What inspiration is there for her to think beyond the mere sordid duties of the hour?

The wise superintendent, either in a large or small hospital, will find it even economical to have the necessary people to perform the manual work about the institution. She isn't paid to work with her hands, she is not fitted either by education or training or practice for manual labor, except occasionally to do some piece of complex technic to show an employee how to do it. The hospital superintendent is paid in accordance with the amount and quality of gray matter she possesses and the application she knows how to make of it. So, do what you are paid to do and let others do what they are paid to do—and everybody will do it better.

Are we not riding our hobby of "all-white" in our hospitals too hard? From some reports that have recently come out of enamelware factories, hospitals are going to have to pay for all-white enamelware furniture, beds, and utensils. It is stated on excellent authority that it is very much more difficult, and consequently more costly, to put white enamel on metal than it is to put olive-green, for the reason that olive-green enamel is made up on a base of iron which hardens much more rapidly and is cheaper than the zinc, which is the base of the white enamels. It costs approximately 25 or 30 percent more for a white article than it does for an olive-green; the olive-green bakes very much harder and better and lasts very much longer than the white.

If we can just get away from the "all-white" idea, we will profit by using green. Of course, we began to use "all-white" because it showed up the dirt better, and really compelled us to scour and scrub oftener in order to maintain the appearance of cleanliness; but, after all, a nice, clean, unchipped piece of olive-green furniture will look very much better than a chipped piece of white. We had better think about this a little bit.

How many hospital superintendents are there who make it a rule to analyze carefully and judiciously the pros and cons of every step they take? It is true that there are a lot of things in hospitals that are not standardized, but there are a good many things that are, and almost everything that we think about doing is capable of some constructive analysis. For instance, let us speculate as to whether the thing we are thinking about doing really ought to be done—and why. Then let us speculate on the process of its doing; first, the most efficient way to do it—that is, the most satisfactory way, the way that will give the best results after the job is completed. Then let us think about the economical way. After we have got this far along we are just half way, because the main point is yet to be accomplished—viz., who shall do the job? Shall the superintendent himself do it as a time-saving operation and because he knows exactly what he wants and how he wants it, or is his time too valuable to spend in a detail, and, if so, who is there in the hospital whose time is not so valuable and yet who can accomplish the job and give an efficient result?

Nearly everything we do is capable of quiet, quick calculation as to cash, and before we give an order for the expenditure of a dollar we ought to know just about where we are going to come out in dollars and cents; oftentimes we start in on some little job and we find before we get through that it has grown to be quite a large operation and costs entirely out of proportion to the actual value of it.